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for

THE EDUCATION OF THE BLIND

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FOR

THE EDUCATION OF THE BLIND

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The International Journal for THE EDUCATION OF THE BLIND is a professional magazine of methods, techniques and research for teachers and workers in the field of the visually handicapped. It is incorporated under the laws of the State of New York to create a medium for the free expression of the progress or the need for progress in the field of the blind. It is intended to provide opportunities for the free exchange of ideas, suggestions, and achievements in the area of the visually handicapped; to disseminate information and the findings of research and experiment relative to the methods and techniques in the education and training of the blind; to give recognition (through awards or otherwise) for outstanding contribution and service to the cause of the blind. In general, to encourage the advancement and uniformity of the methods of teaching and assisting the blind; to foster a greater national and international consciousness and understanding of the problems and well-being of the blind throughout the world; to stimulate interest, research and creative effort affecting the education and training of the blind and to encourage thoughtful and enlightened endeavor to achieve this end.

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(*Continued on inside of back cover*)

THE INTERNATIONAL JOURNAL
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THE EDUCATION OF THE BLIND

Vol. 1 June, 1952 No. 4

CONTENTS

PAGE

About the A.A.I.B. Convention in Louisville, Kentucky 76

Evaluating a School for the Blind—*Joseph J. Kerr* 78

Suggestions for a Coordinated Research Program—*Donald M. Brieland* 80

Training of Blind Shorthand-Typists—*Margaret Penny* 81

Academic Subjects for Retarded Blind Children—
By *Staff Members* of the *Royer Greaves School* 84

Radio Theory and Practice for the Blind—*Robert Gunderson* 89

Travel at the Michigan School for the Blind—*Francis F. Hetherington* 93

Bright Horizons of Hope in Turkey—*Mitat Enc* 96

On the Psychology of the Newly Blinded—*Emma Zaladuk* 97

Research in Great Britain—*J. N. Langdon* 100

Report on the Consultative Committee for the Creation of a World Braille Council—*Paul J. Langan* 102

The Blind in the Hashmite Kingdom of Jordan—*S. T. Dajani* 104

Teaching Popular Music in Schools for the Blind—*James W. Haynes* 105

Educational News from the Field — United States and Abroad 107

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ABOUT THE A.A.I.B. CONVENTION IN LOUISVILLE, KENTUCKY

The Forty-first Biennial Convention of the American Association of Instructors of the Blind will be held in Louisville, Kentucky, beginning Sunday evening, June 29th, and continuing through Thursday noon, July 3rd, 1952. It is to be held simultaneously with the convention of the American Association of Workers for the Blind and will open with a joint session in the auditorium of the Brown Hotel on Sunday evening, June 29th. Most of the general conference sessions will be held at the Kentucky School for the Blind, host of the convention, at 1867 Frankfort Avenue in Louisville, where both the school and the American Printing House for the Blind are located.

The convention is to be a workshop type with discussion groups in administration; commercial arts and typing; household, industrial and manual arts; language arts; library; mathematics; music; nursery, preschool and kindergarten; physical education, travel and recreation; principals and guidance; science; sight conservation; and social studies. Each group will have five sessions of from one and three quarters to two hours in duration with three additional periods provided for meetings and work of sub-committees. A chairman and a recorder for each group will be appointed by the general program chairman. An observer will be appointed by each group. The chairman will be the moderator of the group and be responsible for conducting with the group the plan of the agenda which the group will set up at its first meeting. The recorder will keep an accurate account of the discussion, recommendations, and conclusions. The observer will advise with the chairman and assist to keep the group an efficient working unit.

The value of the workshop conference type of convention lies in the advantage of the consideration and discussion which is possible by the smaller specialized group of individuals who are interested in a particular phase of the education of the blind. It does not destroy the benefits of the wider area because the individual groups meet in general assembly from time to time to pool their ideas, their methods of approach, and report on their progress. Moreover, the workshop conference has proved to be an excellent democratic way of getting a comprehensive viewpoint and consensus of opinion. Its mechanics makes possible to every member of the convention an ample opportunity for expression.

The following are the stated objects of the Forty-first Biennial Convention:—

1. To bring the educators of visually handicapped children together to practice one of the newer ways of learning, i.e., the work conference technique.
2. To encourage teachers to learn from each other.
3. To encourage more effective teaching by encouraging a more wholesome and productive relationship between pupil and teacher.
4. To recognize the worth of the ideas of the individual teacher and to permit his problems and his solutions to be presented.
5. To put faith in the ability of the classroom teacher to do fruitful "action research" by giving him the time and the opportunity.
6. To set up a type of meeting arrangement whereby groups with common problems can work together (a) to define their problems and (b) to seek satisfactory solutions to them.
7. To bring to light helpful instructional methods and materials.
8. To encourage the emergence of desirable basic standards.
9. To clarify basic issues in our special field of education.
10. To improve administrative and supervisory practices.
11. To promote agreement on basic objectives and modern curriculum development.
12. To channel unsolved problems to appropriate standing committees, regional conferences, or the Educational Research Committee of the American Printing House for the Blind for further study.
13. To make social and professional contact with the American Association of Workers for the Blind who will be in simultaneous convention in Louisville.
14. To enjoy Southern hospitality and to visit another of our more progressive schools for visually handicapped children.

Every delegate will have a part in the specific accomplishment of the objectives and work for the success of the conference. The general progress of the conference will be the direct responsibility of a Workshop Advisory Committee made up of all the group chairmen and recorders along with President Finis E. Davis; Host Paul Langan; A.A.I.B. Secretary Egbert Peeler and Chairman of the Executive Committee Robert Thompson.

EVALUATING A SCHOOL FOR THE BLIND

By JOSEPH J. KERR

Although Overbrook School for the Blind was an accredited school under the Department of Public Instruction in Pennsylvania, further accreditation and membership were sought last spring in the Middle States Association of Colleges and Secondary Schools.

To be placed on the list of accredited schools means that the school in question must meet the requirements set up by the Committee on Cooperative Study of Secondary-School Standards. This was begun in 1933 by representatives of the six regional associations of the United States which included the New England, Middle States, Southern, North Central, Northwest and Western Associations.

The aims are:

(1) To determine the characteristics of a good secondary school.
(2) To find practical means and methods to evaluate the effectiveness of a school in terms of its objectives.
(3) To determine the means and processes by which a good school develops into a better one.
(4) To devise ways by which regional associations can stimulate and assist secondary schools to continuous growth.

The committee in charge of the Cooperative Study of Secondary-School Standards recommended after extensive study and analyses of the activities carried out in the period 1933-39, that a secondary school is best evaluated by making a self-evaluation using the Evaluative Criteria and having this self-evaluation checked by a visiting committee composed of experienced and well-prepared professional workers in the field of education.

The entire staff at Overbrook, including both the professional and non-professional members, participated in the self-evaluation.

A steering committee headed by the writer organized the entire self-evaluation. The staff was placed on the different committees, some serving on two and a few on three committees. This meant that many meetings were held and after careful discussion results were checked and rechecked. The reports were checked and in case of disagreement as to rating, the committee met again to decide on the final rating. There were few times in all the areas covered that there was any vast difference of opinion and these were settled easily when both sides of the questions were discussed.

The different areas included:
Pupil Population and School Community
Educational Needs of Youth
Program of Studies
Pupil Activity Program
Library Services
Guidance Services
School Plant
School Staff and Administration

Under the Program of Studies the following items are listed:

Core Program
Agriculture
Art
Business Education
English
Foreign Languages
Health and Safety
Home Economics
Industrial Arts
Industrial Vocational Education
Mathematics
Music
Physical Education for Boys
Physical Education for Girls
Science
Social Studies

We could eliminate the Core Program, Agriculture and Art in our present setup.

Some schools in preparing for the self-evaluation begin a year in advance but due to circumstances we spent four months which meant that all the areas had to be covered in a shorter space of time.

Joseph J. Kerr is Assistant Principal of The Overbrook School for the Blind and Associate Editor of The International Journal for the Education of the Blind. Mr. Kerr is a graduate of Westchester State College with a B. S. degree and has done graduate work at the University of Pennsylvania with an M. S. degree.

The committees that worked on the eight sections mentioned before were known as the Major Section Committees and the committees working on the areas under the Program of Studies were known as the Subject Area Committees.

To give you some idea of the material covered, the Evaluative Criteria is a paper-bound booklet printed on both sides and in very small print on 11 x 8 inch paper covering 305 pages.

The committee must rate each item under all the questions and statements in the different areas. In the check list a double check means that provision or condition is made extensively. A single check means that provision or condition is made to some extent. An "X" means that provision or condition is very limited. An "M" means provision or condition is missing but needed. An "N" means that provision or condition is not desirable or does not apply.

The evaluations were rated

5.—EXCELLENT: the provisions or conditions are extensive and are functioning excellently.

4.—VERY GOOD: a. the provisions or conditions are extensive and are functioning well, or

b. the provisions or conditions are moderately extensive but are functioning excellently.

3.—GOOD: the provisions or conditions are moderately extensive and are functioning well.

2.—FAIR: a. the provisions or conditions are moderately extensive but are functioning poorly, or

b. the provisions or conditions are limited in extent but are functioning well.

1.—POOR: the provisions or conditions are limited in extent and are functioning poorly.

M.—MISSING: the provisions or conditions are missing and needed; if present, they would make a contribution to the educational needs of the youth in this community.

N.—DOES NOT APPLY: the provisions or conditions are missing but do not apply or are not desirable for the youth of this school or community. (Reasons for the use of this symbol should be explained in this case under *Comments.*)

In addition to these ratings there is space for supplementary data and comment.

All of the data are so arranged that one checks on the other.

Each member of the staff must fill out a "J" blank which covers his qualifications including preparation for teaching, academic and professional; improvement in service; reading; advanced courses; study of school problems; schedules and professional qualifications.

The first thing to be accomplished in the self-evaluation was to put in writing the philosophy of the school. This was developed in one of the committees and then after writing and rewriting by the staff, a summarizing statement of the purposes and responsibilities of the school was finally completed. To do this it was necessary for the staff to know something about the Educational Needs of Youth. This includes one hundred and twenty-five separate items under eight headings.

The evaluation was a new experience for our staff, for only two had had previous experience.

It did give an opportunity for the staff to work together and to become acquainted with the different problems and to learn how the other departments in the school operated.

We were able to evaluate our own weaknesses and strong points and to make recommendations for the improvement of our school.

After the self-evaluation was completed and all reports written in duplicate and the whole school informed, we waited for the Visiting Committee to make its appearance.

This committee included teachers, administrators, members of college faculties, educational specialists and laymen in special areas. Its purpose was to check the self-evaluation ratings made by the school staff, for the purpose of improving the school program, and the services rendered to the boys and girls.

On April 24, 25, 26, 1951 a committee of ten made its appearance and for three days, through observations and interviews, became acquainted thoroughly with the work. The committee was divided into subcommittees which were responsible for covering the different areas and for observing and talking with each staff member. The members of the committee talked also with individual pupils and with groups on all phases of school life.

At the end of the third day the chairman of the committee met with the staff and presented a general verbal report of the committee's findings. The final decision as to whether Overbrook had met the requirements was not to be had at that time. It would take several months for the general committee in

charge of the Cooperative Study to go over all the charts, reports, and data submitted by the visiting committee.

In January 1952 we received official notification of our accreditation and membership in the Middle States Association of Colleges and Secondary Schools. We feel extremely proud of our achievement. This experience has enabled us to improve our service and to better meet the challenge of the educational needs of youth.

SUGGESTIONS FOR A COORDINATED RESEARCH PROGRAM

By DONALD M. BRIELAND

This is a research-conscious generation. We look to science for answers to many questions. Not only is this true in the area of nuclear physics but in the areas of psychological and educational research as well. It seems worthwhile for professional workers with the blind to acquaint themselves with the possible contributions that research can make as well as with problems which may arise in setting up a research program.

The organization of the National Psychological Research Council for the Blind marks a significant effort to coordinate research activities designed to assist those working with the blind and the visually handicapped. The Council has recently made a survey of unpublished research collected in various university libraries. This provides us with access to studies which for practical purposes were hitherto unavailable.

A summary of suggested research projects has also been published.[1] A critical review of the recent psychological literature is being prepared in mimeographed form for general distribution to agencies for the blind. It is hoped that an abridged version of this report may be published in a widely-circulated psychological journal to present the status of research in the area to psychologists and particularly to those who are advisers to graduate students.

The following additional suggestions are offered in the development of a coordinated research program:

1. The compiling of an annual annotated summary of research on the blind should be developed so that findings may be kept up-to-date. A clearing house for summarizing projects which are under way should also be provided. Much might be learned from the United States Children's Bureau which is providing a clearing house for research with children. The research summary and the clearing house should be international in scope.

2. Previous psychological research has been concerned with specific problems often of limited scope and of limited interest. Analysis of research needs by the American Association of Instructors of the Blind, and National Council, representatives of teachers of the visually handicapped, and of adult blind groups can provide insight into the problems that are significant and indicate which ones should take priority.

3. The success of any research program with the blind will depend upon realization of two objectives: (a) training professional workers in research techniques as well as in their service functions, and providing time and funds for research work; (b) using the talents of university and college staff members and graduate students.

4. Graduate students in psychology, education, social work, child development, and medicine are constantly seeking problems for thesis study. Not only should they find easy access to suggested thesis problems but they should get encouragement and assistance in locating subjects dealing with blindness. Since the number of doctoral candidates is limited, the most significant graduate research will probably result if major research problems can be divided into

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Donald Brieland is well known to readers of the International Journal, having written a leading article in Vol. 1, No. 1, page 9, entitled *"Speech Education for the Visually Handicapped.*

1. National Psychological Research Council for the Blind, "Research, suggestions on psychological problems associated with blindness." Federal Security Agency, Office of Vocational Rehabilitation, 1951, 20 pp.

sub-parts of sufficient scope for master's degree candidates.

5. To implement such a program, more meetings on a regional basis with faculty members in the various fields, should be arranged from time to time. If graduate advisers are made aware of specific research areas where work is needed, the basis for a series of studies in that area by graduate students could be established. In that way, area by area, data of great importance could be gathered.

6. Limited practical problems such as census-taking of blind cases in a given area are not generally suitable for thesis subjects because they do not involve a unique research design. This type of study should be encouraged for students who are required to do field projects or limited research projects for the requirements of a Master's Degree on a non-thesis plan.

7. The aims of a graduate adviser in designing and directing a research study and the agencies who provide the subjects will not always coincide. In order to develop a coordinated research program, the purposes and interests of the cooperating college or university department and of the students must be considered. This may mean that from a practical point of view, the agency will have to make concessions in allotment of time and use of facilities. Unless this is done, the amount of research which universities are willing to sponsor will be limited.

8. An agency must adopt a cooperative and enthusiastic attitude toward projects which are undertaken. Often the attitudes of an agency staff or school faculty will influence the attitudes of the visually handicapped subjects so that their cooperation is dependent upon how the agency workers feel about the project. Even if a specific project ends in failure, this does not reduce the need for research nor the practical value of research in general to the field.

9. The members of the staff and the subjects themselves should have a clear idea of the purposes of the research and understand the project fully. This will lead to better cooperation. The student or research worker should have some opportunity to assess the needs and responses of blind subjects by observing them before he begins his formal research work.

10. Groups interested in the blind will need to secure funds to be made available to competent staff members in colleges and universities for the research problems which are considered to be most crucial.

A coordinated research program involving various agencies and universities and colleges should pay long-term dividends in developing the interest of qualified students and staff members in subsequent full-time work with the blind.

TRAINING OF BLIND SHORTHAND-TYPISTS

By MARGARET PENNY

In the Annual Report of the Royal Normal College 1875-6, Sir Francis Campbell (one of the founders of the College) drew attention to "a new machine called a 'typewriter' now extensively manufactured in America . . " as destined to furnish remunerative employment for blind females. His hopes for the employment of blind typists were not given effect until some 20-25 years later through the invention at the Birmingham Royal Institution for the Blind, of a system of Braille shorthand, followed very closely by the invention by Mr. Henry Stainsby, then Principal of that Institution, of a Braille shorthand machine, which was manufactured by Mr. Alfred Wayne. About the same time, the Birmingham Royal Institution maintained a Typewriting Bureau in Birmingham, where blind instructors gave lessons to sighted people.

It was not until 1903 that the Royal Normal College recorded instruction in shorthand and typewriting for commercial purposes, but rapid progress was made in this subject following the invention of the Braille scale by Mr. Herbert Black, a member of the College staff. The scale is illustrated below.

Margaret Penny is Head of the Typewriting Department of the Royal Normal College for the Blind, Rowton Castle, near Shrewsbury, England.

It will be seen that this scale is marked off by different combinations of dots. At every inch the Braille symbols for the numbers 1, 2, 3, 4, etc., appear on the top of the scale, with a single dot under each number. The single dot under the Braille numbers indicates the "tens," so that these numbers become 10, 20, 30, 40, etc. At the half inch are two vertical dots, standing for the "fives." To ascertain which "five" the finger is "reading," reference must be made to the previous "ten." The intermediate numbers, for instance, 11, 12, 13, 14, 16, 17, 18 and 19, are "read" by gauging the distance between the pointer and the nearest 5 or 10. The scale is attached to the carriage of the machine, whilst the pointer, taking the form of a single dot placed on a small platform in juxtaposition to the scale, is stationary. Thus, as in the case of the sighted scale, a different number is registered with each tap of the keys or space-bar. Once the principles of the scale have been mastered, the "reading" of it with the fingers is a very simple matter to the Braillist.

It is no exaggeration to say that this invention revolutionized the whole conception of training, and at last vision was translated into reality by the evolution of certain teaching methods which laid the foundation of an adequate training. From then onwards, these methods have been still further developed until to-day "blind" typewriting may almost be said to have been transformed from a craft into an art. In most respects the methods other than actual keyboard practice differ fundamentally from those employed in teaching the sighted and the period of training must necessarily be longer. It is only possible in a short article to outline the general principles, as a detailed description of all the methods could only be contained within the covers of a text-book.

The teaching of the operative parts of the machine forms the first lesson. Next comes the insertion of the paper. The student is first taught to appreciate the size of the paper in terms of spaces and line-levels, i.e., if a paper 8" wide is being used and a machine with pica type (10 spaces to the inch) it must be possible to write 80 characters from left to right on the paper. Similarly, if a sheet of paper is 10" long and the number of line-levels to the inch is 6, then it is possible to write, from top to bottom, 60 lines of type. The student is, therefore, quick to appreciate that the paper must be so placed in the machine that when he writes in the first degree of the scale the character so written should fall in the first of the 80 spaces on the paper, the margin then being arranged according to the nature of the work. He is encouraged, during the first lesson or so, to test the accuracy of insertion by writing a full-stop in the 1st degree of the scale. A heavily-struck full-stop takes on the nature of a Braille dot on the reverse side of the paper, and he is then able to test for himself whether his paper is correctly inserted. The student is then taught how to find the first of the 60 writing levels, and, again, he is able to test for himself whether he is "on" the correct level by writing a few dots horizontally and feeling the position of the full-stops in relation to the top edge of the paper. He is then able to "feed up" from that level to the appropriate one for commencing his work. These may seem irritating details, but as the whole of the methods are based on spaces and line-levels, too much importance cannot be attached to this early lesson, inculcating as it does, the necessity for care and precision down to the smallest detail.

The student is now ready to commence keyboard practice. This does not differ from sighted methods, but there is one advantage—the blind operator *must* learn by "touch" and no repeated and often irritating instructions to refrain from looking at the keyboard are necessary. It is found advisable to block out with discs of fine emery paper the middle keys "Y," "H," and "N," so that the keyboard is, in effect, divided into two portions.

When the keyboard has been mastered and writing has become fairly fluent, the student has his first lesson on using the scale in learning how to centre headings. The methods used will be much the same as those employed by sighted students, but the important fact is that the blind student can, by the use of the Braille scale, check his own work. For example, a heading is given to him to centre: he takes the carriage to "zero" and, by tapping off each letter space and spaces between words, he finds, we will say, that the scale "reads" 20. The heading therefore takes 20 spaces from the width of the paper, i.e., 80 spaces, leaves 60 spaces. Half of 60 is 30, and he knows that he must begin writing the heading 31. When he has written the 20 spaces contained in the heading, the scale will "read" 51, the last letter falling in 50. From 51 to 80 inclusively there are 30 spaces, proving that the heading has been correctly centred. So, from small beginnings, he accustoms him-

self to work by means of arithmetical calculations, and stage by stage advances to more difficult work, in all of which he has the satisfaction of being able to check for himself the position of columns of figures, the headings over them, etc.; in fact, everything except accuracy of writing, but here it may be said that there are few competent blind typists who are not aware of having typed a wrong letter.

The syllabus has been arranged to cover a course of twelve terms, each term s work becoming progressively more difficult, and embraces a wide range, from correspondence to statements of account, balance sheets, specifications and bills of quantity, legal work, programmes, dramatis personae, dictaphone and stencil work, ornamental designs, etc. There is a method for every kind of work, but the foundation of each method is the same — the use of the Braille scale and calculation of spaces and line-levels. To illustrate the length to which these methods have been perfected, it is well within the ability of the average blind student to type a complicated tabular paper with vertical headings. The horizontal portion of the work is typed first, the paper removed from the machine, re-inserted lengthwise and the correct position found, unaided by sighted help, for writing the vertical headings. To the uninitiated this may seem a little uncanny, but by a process of turning line-levels into spaces and spaces into line-levels this kind of work is quite practicable. The laying-out of a complicated tabular compilation does entail a good deal of juggling with numbers, first in working out the position of the columns, arranging starting points for headings, ensuring that line-levels are not lost track of, but it has been proven that the intelligent blind student enjoys the mental exercise it provides; he does not find that it imposes too great a strain on his cultivated memory; it gives him a sense of achievement, and, what is too important to be overlooked, a feeling of equality with sighted typists. During his period of training the cultural side is not lost sight of; he continues his general education, with particular emphasis on English, follows a course of physical training and can study music and French if he has sufficient ability and inclination.

Instruction in shorthand is concurrent with instruction in typewriting, and until the student's shorthand is sufficiently proficient to use as a medium for reproducing his work, all typewriting exercises are worked through the medium of Braille longhand. It may be said at this point that the original shorthand system was revised in 1910 and again in 1945, and the system as it stands to-day is a comprehensive and eminently practical one.

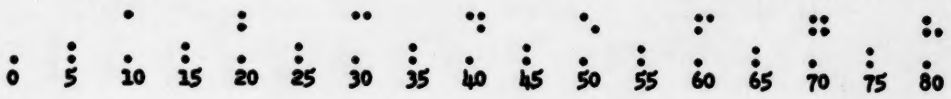
Students, who now number over seventy boys and girls, are prepared for examination up to Advanced standard in Royal Society of Arts Typewriting and 1220 w.p.m. Shorthand; Arts Typewriting and 120 w.p.m. Shorthand; Typewriting, and English. Since examinations were first taken in 1926, there have been 1,128 successes, with a failure percentage of 2.8. In addition, in open competition with sighted candidates, 26 medals — 12 silver and 13 bronze — have been won, in some cases the candidates taking first place in the Country.

One of the difficulties the teacher has to be prepared to face is that of giving to the student in the early stages of training a complete mental picture of the exercise, whatever it may be, that is being taught. A student blind from birth can have little conception of what type itself is like, much less even the simplest tabular statement, and it is here that the ingenuity of the teacher, often aided by home-made diagrams, comes in. Necessary qualities are endless patience and resourcefulness on the part of the teacher, a cultivation of the imagination on the part of the student, hard work and plenty of enthusiasm on both sides, and complete sympathy between teacher and student.

The war-time demand for labour gave a great stimulus to the employment of blind shorthand-typists. One hundred and forty-seven students trained at the Royal Normal College since 1940 are now self-supporting, and, in ever-increasing numbers, are filling posts in many difficult kinds of offices — commercial, legal, hospital and those of local and central government — and it is hoped that the reputation they have made for themselves will lead to still wider opportunities in this field of employment.

It will be appreciated that this article is concerned with the circumstances with which the writer is best acquainted, but mention should be made of the College for Training Shorthand-Typists which was recently opened by the National Institute for the Blind to meet the need of adult students who there receive a much shorter and more intensive course than that provided for the young people, mainly the 16-20 age group, at the Royal Normal College. The services of the

two establishments are therefore complementary, and grateful acknowledge must be made of the valuable services of the National Institute for the Blind Placement Officers in finding suitable posts for many of the students trained at the Royal Normal College.



ACADEMIC SUBJECTS FOR RETARDED BLIND CHILDREN

By STAFF MEMBERS OF THE ROYER GREAVES SCHOOL

Arithmetic — By Charles S. Napier

Substitutes may be found for reading and writing in our present form of group life, but not for numbers. They are so integral a part of our every day life that we no longer recognize this fact unless we begin to list the ways in which we use them, then it is startling. The purpose of an arithmetic class is to give the youngster the understanding, the skills and the utilization of the various forms of "counting" in order that he may adequately participate in the group life around him both now and later. Hence it is not just arithmetic for arithmetic sake or just another medium for mental practice, but how and when to use numbers for his own sake.

As arithmetic is to be a functional part of the child's action skills, it should be so taught. The methods, the materials and the examples should, therefore, be taken from the experiences which the child has had or will have. The child must recognize this fact.

All of our children are placed in arithmetic classes. They proceed according to their abilities. In our school there are more arithmetic classes than is usual in proportion to the number of students. We wish our classes to be small with the levels of difficulty between these classes being rather close. The small class gives greater chance to the individual — for any class can teach only individuals — and makes possible greater flexibility in moving the younger pupil into or out of classes according to his grasp of the materials used. This movement can take place at any time, not just at the end of the year or in the middle of the year.

Some of our youngsters are able to apply reading and writing skills to their arithmetic work by using notebooks. Except for these few, the instruction must be oral. Oral in the sense of suggestions and examples for guiding them in their handling of objects. Oral instruction alone would allow for mere rote without meaning. Some tangible materials must be utilized to which the numbers and the counting can be tied. A box of blocks, buttons, coins, milk bottle stoppers, a shelf of books, a row of chairs or any other group of interesting materials which can be manipulated, and which are tangible, are of more use than any and all the textbooks. Because of the variety in the speed of comprehension and the various retention abilities of our youngsters, no one textbook will meet our needs.

How do we do it? We are ready to use any method, technique or material which will help the particular individual in that immediate class regardless of what we have planned to do. Any method is used, if it works. If it does not work, it is put aside. The youngsters are encouraged to get the sequence of numbers and their names through song, rhyme, story or game. Games are found to be very good to give meaning to the number names.

After number ordering is gained up through twenty the usual processes are developed. Addition is taught as counting things together. Subtraction is taught as counting apart or

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Charles S. Napier, blinded at 18, attended high school at the Illinois School for the Blind and received his AB and MA degrees from the University of Illinois. Mr. Napier is teacher-psychologist at the Royer-Greaves School.

away from. Multiplication is taught as one number times another number or a quick method of addition. Division is taught as how many times one number goes into another number.

The main stress is laid on gaining a working understanding and skill in the use of addition facts and coin values. First, the addition facts are 1 and 1, 2 and 1, etc., up to 9 and 9 and then, the adding of 0 and 10 to the digits. The pupils seem to recall "the doubles" easier than other combinations, and they are encouraged to use them to build to the desired combination. For example, 9 and 10 are figured from 9 and 9, and then, the next step to the problem is taken. They are always encouraged to build from something they know to something they are seeking. This figuring can be done with or without objects. When a youngster shows a lack of confidence in his result or if it is incorrect, he is encouraged to figure it again or check with objects.

After the main addition facts are gained, two-figure numbers are introduced. First, a digit is added to a two-figure number, then two two-figure numbers are added. Some students ask to add three-figure numbers. The principles of column formation have thus been indicated and are developed. The process of "carrying" is shown and explained. The explanation of "overflowing" seems to be easily grasped.

We take every opportunity to encourage the youngsters to solve, to formulate and to recognize "word problems." These problems are given because we recognize that few actual number or counting situations in life set themselves forth in the usual textbook form of 1 and 1 or 21 and 21. In so doing they are also encouraged to recognize what the facts are, and what the question or problem is, and that a solution requires facts to be known. One advantage of this type of work is that it gives an opportunity to introduce other and more advanced arithemetic processes as well as allowing the youngsters to develop the idea that rarely does a problem require one process only to solve it.

When techniques are considered, they must be active participation types to be effective. It has already been indicated that songs, poems, stories and so forth are usable. The fact that every teacher learns by teaching can be applied. This technique can be used either by having one youngster act as teacher to the entire group or to one individual. Games in small groups using objects are enjoyed by most youngsters. One of the games is to have one of the students quiz the teacher who deliberately makes mistakes and have the rest of the group act as score keepers and judges. The youngster poses a problem which the teacher is to solve, and he is to indicate whether the teacher's answer is correct. The remainder of the group judges the youngster's correctness.

The techniques and methods used in teaching arithmetic in our school are determined by the needs and the problems of the individual student. Furthermore, if a student's performance indicates that he can do more advanced work, our schedule is so set up that he can be moved forward to another class before the term has ended. Repetition of arithmetic facts as the students progress and emphasis on every-day experiences are most effective in developing practical use and application of numbers and counting in every-day living.

Spelling — By Anna C. Perry

Every child in the school is given a chance to learn to spell. Some children show such ability that from year to year they are able to progress almost as rapidly as normal children. Most of the children, however, require two or more years to accomplish the spelling lessons covered by normal children in one year.

There are a few who for varying reasons make very slow progress. These it is necessary to retain for two or three years within the group they are placed. Some few remain in the beginning group for four or five years before they begin to progress. These children usually have special handicaps. If, after a period of several years, it is felt that very slow children are unable to progress further, they are withdrawn from Spelling and assigned to other classes in which they may be capable of better performance. This rarely happens, however.

The children who progress the most rapidly are found to be natural spellers — some with a good feeling for phonics — others with a good rote memory. Such children may do far better work in Spelling than in any other class.

Mrs. Anna C. Perry is a graduate of the State Teachers College at Bridgewater, Massachusetts, with the degree of Bachelor of Science in Education. Mrs. Perry (Walter S.) had done graduate work at Harvard University.

The classes are arranged homogeneously according to spelling ability. Occasionally promotions are made during the school year if an individual child is found to be progressing more rapidly than those with whom he is grouped.

In general, instruction is oral. A minority of children in any of the classes is able to read or write. As each lesson is presented, care is taken to have the correct impressions made first in order to preclude trial and error. Emphasis is placed on phonic and syllabic spelling. The words in each lesson are studied daily until it is felt that the children are ready to be tested. The studying includes the actual spelling of the words and the usage of some in sentences. Tests are given in order to give the children a sense of accomplishment and progress.

The children in all classes, but the beginning, usually progress at about the same rate and so the teachers can keep these classes together on the lessons at hand. The beginners' class is often found to be the largest class since it annually consists of new children and of children who have been retained from the class of the previous year. In this class, the repeaters may be in need of repeating the entire year's work — or they may be working on lessons left unaccomplished at the end of the preceding year's work. In this latter case, such children would be promoted during the course of the year to the next level — if they are able to catch up with the work of that class.

There are also repeaters who are considered as non-spellers. These non-spellers are given a long and thorough opportunity to begin to spell. New arrivals sometimes require as much as two and more years to become sufficiently adjusted to school life to commence to spell. Children with previous experience at a school or kindergarten generally start to progress earlier than those who have never been to any school before. The beginning class therefore seldom finds two children studying the same words. Instruction at this level is necessarily much more individual. Effort is made to draw each member of the class into the day's work.

There are sometimes a few children in this class who can read and write Braille or large print. The Braille pupils may be able to use either the peg board or the Braille writer (or slate). To these Braille or large type readers, the teacher can assign independent study while he works with others on their oral lessons and with the non-spellers on games and songs designed to make a pathway to phonics and the alphabet.

The higher levels follow largely the same procedures. Wherever possible, reading and writing of the lessons by the children are encouraged. The value of employing these additional avenues of learning is undeniable. Those able to make use of them learn more easily and surely than they should otherwise. Work in their reading and writing classes has more motivation when the children have an immediate use for such skills. These children are proud of their ability to use the spelling text and to have their own notebooks — whether Braille or print. They are eager to take written tests. Some children use the typewriter for their tests.

Student teachers are appointed wherever possible. Much enjoyment is derived from regular spelling bees. The most advanced group works at the 6th grade level. Here, it is necessary to spend a great deal of time studying the meaning and usage of words under consideration — especially words of abstract meaning. It is felt that ability to spell words is of little value unless the children can add them to their own vocabularies. Their vocabularies are small because so few of them read. Many of the children come from homes where vocabularies are limited.

In correlation with English work, the spelling words of each lesson are employed in grammatical sentences. Effort is made for the use of the words in an informative and interesting manner. Some children reveal a creative imagination. Others form their sentences after a stereotyped pattern.

Mention should be made of the dictionary. There are a few children who are able to make use of the many volumes of the Braille dictionary. These children receive regular assignments in order to develop facility and familiarity in using the dictionary.

Children are seldom removed from spelling. The reasons for so doing are the following:—

Total or near total deafness inhibiting speech

Age of child — if nearing dismissal age and it is felt that extra time in the shop would be more beneficial

No progress after several years' exposure to spelling.

Every effort is made to enable each child in the school to make all the progress of which he is capable at the rate most suitable to him.

Typing — By Betty Ryder Strickland

The essential purpose of education in the Royer-Greaves School is to prepare children who are retarded and who may have a handicap in addition to blindness for living happily in a real and normal world. To this end they must be given every skill which they can absorb, and which will help them to maintain contact with their friends and families and to express themselves as freely as possible. Besides Braille and Sight-Saving reading and writing, they are given the opportunity to learn to type.

We do not use age as a criterian for placing children in typing classes. Some knowledge of spelling is considered a requisite, and older students are, of course, given the first chance to learn. However, if a child seems mentally mature enough to use the typewriter practically, he may start to learn this skill at the age of eight, nine or ten. Sometimes, as in all classes involving coordination between hands and mind, a boy or girl may be given typing to aid in loosing tense and untrained fingers.

Of course, we teach our children the touch method of typing. The totally blind student has an advantage in learning to type by touch as he is not tempted to use his eyes. As in many schools for the blind a large number of our children have partial vision. This vision poses a problem for, unlike normally sighted persons, they are unable to read from a chart or paper to keep their eyes from following the keyboard. It must be impressed on them that to type with speed and accuracy they will have more success with the touch system. The keys are capped to discourage reading the letters. Sometimes a home-made mask is used to stop the use of sight.

No set pattern is followed in teaching the keyboard. Because of the intensified and varied problems our children have, all of our teaching is individualized. Some children have good hand use and a fairly quick grasp of spatial relationships. With such children the "home keys" are taught and then the "family keys" for each finger. The numerals are taught after the use of the shift key is mastered. Students whose hands are tense and clumsy, who literally have never used their fingers separately, must be taken more slowly. They learn all the keys for the finger with which they have the greatest ability, and then they progress to learning the keys operated by the fingers they scarcely realize they had.

The time needed to master the keyboard varies from pupil to pupil. We have learned never to be discouraged by a "snail's pace" in learning. A child with unskilled fingers, and one lacking in self-confidence, may take as many as two or three years before he can attempt even a simple sentence on the typewriter. Another child may have learned the keyboard and be in the process of writing his own letters in the space of a month or two.

Placing and removing the covers of our portable typewriters is presented at the same time as teaching the keys. Each pupil must do this for himself at the beginning and end of the typing period. Being able to insert the paper is also a necessary achievement. It is sometimes very difficult to develop in the pupils without any vision a comprehension of the long and short dimensions of the paper. The fascination for a child in handling a machine often helps to carry him over the very knotty problems involved in that handling.

Practicality must of necessity be the keynote in all of our teaching. As a boy or girl learns letters on the keyboard he is given words from his spelling class to write. When all of the keys are learned, he uses the words he knows in sentences. Here is an invaluable chance to insert training in language and expression. Arithmetic learning is furthered by having a child type numbers to 100 and beyond. This activity often helps to develop the concept of the formation of numbers by tens and the parts of ten. Sometimes spelling tests and drills are given on the typewriter at the request of the spelling teacher.

A child who has progressed far enough in Braille is given practice in copying from a Braille sheet. The students type from oral dictation. Occasionally rhythm records are played on the phonograph to develop speed and timing in typing. This activity is a great favorite and it is regarded as a game.

Our school publishes a monthly magazine. All of the children contribute articles to it. Many of these articles must be dictated to the teachers because the children have not yet learned any means of recording their ideas. As the typists gain confidence in self-expression they begin to type their own articles. Sometimes they must make many drafts before anything readable is produced. As they gain

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Betty R. Strickland (Mrs. Howard Strickland) graduated from the New Jersey College for Women, Rutgers University, in 1944 with a B. A. degree.

experience they need not have their articles recopied by the teacher.

The supreme accomplishment, and understandably so, is a letter to Mother and Dad written on the typewriter. It is surely a satisfaction to be able to communicate directly without dependence on a third person, even to accomplished Braille-writing friends. The letter home is the aim of all pupils, and sooner or later they all write that letter. Some may be all too briefly and ploddingly written while others are true examples of "talking on paper," but each letter is a matter of great pride to both sender and receiver. Some students are able to learn to address the envelope. Boys and girls who gain real facility in handling their machines are given permission to use typewriters in their free time for letter writing.

It is rarely that a pupil is removed from typing before he leaves the school. There are always many ways in which he can put his typing period to productive use. Thank you letters must be written. Minutes of club meetings are sometimes typed. Tests from any kind of class can be given on the typewriter. The process of learning to express one's thoughts in an organized and an interesting manner seems to be a never ending one. Only when we are pressed for typewriters by a large number of students who seem ready to learn do we remove an accomplished student from his scheduled typing class. Then he is encouraged to make use of the machine in his leisure time.

Typing has a definite place in the releasing of a retarded personality. For some it is a long, slow process of training unused fingers and letting out shut-in, hesitant thoughts. For others it rounds out an already expanding ability to communicate with others by all means available. For all it is the chance to acquire another tool for living in a normal world.

Visual Aid Instruction — By Mae Toner

There are seven partially sighted children, ranging in age from nine to seventeen years, in the Visual Aid Instruction classes in the Royer-Greaves School for the Blind in Paoli, Pennsylvania. In the newly cream-painted Visual Aid classroom with nine large two-section fluorescent lights, you will see several children sitting around a long table. It is covered with a light colored oil cloth to match the room.

A large bookcase contains approximately 112 large print books. They include science, spelling, arithmetic, reading and language.

Three-fourth inch writing paper is used for their printing and script. They write with thick black lead pencils.

Handmade flash cards, pictures, stories, drills and supplementary books are used in this class. Some of the children can put together jig-saw puzzles which teaches them shape and color.

The teaching techniques and methods seem to run parallel with other retarded children. They start to read a primer in order to see which book they can read well. Sometimes an older child entertains a younger one and the stories in the primer delight that one. Supplementary material must be found to interest the older children, but containing an easy vocabulary. It must have easy sentence structure too.

A few of the many things we stress are as follows: making new word friends, learning the phonetic clues to new words, learning phrases — then sentences, trying to move the eyes from left to right across the page, learning the author's words, understanding and enjoying what has been read, remembering what is read, finding the stories in the table of contents, repetition — flash cards — drill, picture the story and read it as if you were talking.

When a child has the habit of making mistakes on little words when he knows better, get him to study each paragraph before he reads aloud. Get the child to go back to the beginning of the story and re-read it.

Some children pronounce a word then repeat it several times. This habit is very bad. Other children will say, "Where," instead of, "There." You can tell them the word over and over again, and at the end of the period they will continue to have said the wrong word.

One child read so fast that you could not understand her. At the end of a sentence she read the first word of the next sentence so rapidly that it did not make sense. It was difficult to get her to slow down.

Another child read too slowly. When he first started to read he had to spell every word first. He has gained speed by trying to read the sentence phrase by phrase.

There are many problems which have confronted us, but through perseverence we are gradually overcoming them.

Mae I. Toner is a graduate of the State Normal School in West Chester, Pa., and has long been associated with educational activities in the state of Pennsylvania.

RADIO THEORY AND PRACTICE FOR THE BLIND

By ROBERT GUNDERSON

In teaching radio and electronics to the blind, we are confronted by two main difficulties — the lack of technical radio literature in Braille, and the scarcity of specialized measuring instruments for the making of circuit measurements.

The problem of radio literature has been partially solved with the introduction of "The Braille Technical Press" a radio and electronics magazine, published monthly for the blind. This magazine contains departments for the amateur, the beginner who wishes to learn something about the workings of radio and electronics, the radio repairman, the sound recording technician and others.

"The Braille Technical Press" has been established as a non-profit corporation managed by a board of directors made up of blind radio amateurs, and also of men in the radio and electronics industry. If the Braille reader can afford the subscription, he pays fifty cents per copy or six dollars per year for the twelve issues; if he cannot, he receives the magazine free of charge upon request.

The problem of suitable measuring instruments has been almost completely solved by converting circuit measurements into nulls or absence of sound, or into changes in audio frequency pitch. It is gratifying to note that many of the sighted technicians who have examined this equipment, have built it for their own use. Equipment of this type has a very definite advantage, since there are no delicate meter movements to burn on sudden overloads. The equipment is rugged enough to withstand a lot of hard use by the operator. The information listed below is a brief summary of some of the equipment, together with a brief description of the operation of these various instruments.

AC VOLTMETER

The simplest form of AC voltmeter is a rectifier working into a large filter condenser, connected across a potentiometer and multiplier. For information on potentiometer and multiplier, refer to DC voltmeter.

Under these conditions, the voltage across the filter condenser will be equal to the peak voltage of the line, provided the resistance of the multiplier is sufficiently high. Thus the potentiometer-multiplier reads peak voltage, and the reading must be multiplied by 0.707 to obtain the effective. However, we had meters here, calibrated initially to read effective or R.M.S. values, by increasing the voltage across the potentiometer. The null indicator again is the chopper and headset.

Crystal type rectifiers such as the type IN34 are used for low voltages, and selenium or thermionic rectifiers are used for higher voltages.

ANTENNASCOPE

The only changes made with the antennascope are the introduction of a headset, along with the 2 volt-vibrator, so that the null or balance point can be indicated, and the Brailling of the scale.

CAPACITANCE BRIDGE

The capacitance bridge is a Wheatstone Resistance Bridge, except that it contains a standard fixed capacitor, along with a calibrated rheostat, which carries the Brailled index. A condenser decade is used for the standard condenser so that a number of full scale readings may be obtained. An additional resistance (variable) is used for calibrating the instrument, along with another for power factor measurement. In the models already built, a 1,000 cycle hummer is used for the voltage developed across the inductance of the 2 volt synchronous vibrator. The bridges are also provided with connection for coupling to a standard audio frequency oscillator. The standard condenser is outboard, so that it may be

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connected to have the bridge measure from zero to the full value of any standard condenser in the decade, or from the value of the standard to 10 times this value. The indicator, as in most of the measuring equipment, is a headset, connected at the center of the bridge.

CAPACITANCE CHECKER FOR THE MEASUREMENT OF SMALL CONDENSERS

This is used to measure the temperature-capacity coefficient of small condensers, and also to measure capacitances from 1 to about 200 mmf.

It consists of two crystal controlled oscillators k kc. apart. An additional variable frequency oscillator is also provided, and all three feed a common mixer circuit, with a headset in the output.

The circuit is so arranged that when the capacity of the tuning condenser in the variable oscillator is nearly maximum, the VFO produces zero beat with the low frequency side of the system, and a steady 1 kc. note is produced. Two terminals are brought out to the top of the instrument from the variable condenser, for connection to the unknown. If for example, a 50 mmf. condenser is connected across these terminals, the main tuning dial must be backed off by 50 mmf. In the model built here, the condenser has maximum capacity of 200 mmf., and a minimum of about 20. High C is used in the variable frequency oscillator for adequate frequency stabilizing. The unit is completely self-contained. The dial on the tuning condenser is calibrated in terms of the tuning condenser's decrease in capacity equal to the increase in external capacity. A trimmer condenser is provided to set the zero beat dial reading.

CARRIER SHIFT METER AND MODULATION MONITOR

This device consists of a DC voltmeter using the potentiometer and multiplier, together with a tuned circuit associated with a crystal rectifier which may be used as a monitor. This also serves as the rectifier for reading the peak carrier level, and also serves to determine that the transmitter is being upward or downward modulated. To read carrier shift, the output of this rectifier is connected in series with a large resistance and a large capacity, and the voltage across the condenser is read on the meter, by listening for the null in the headset. This will be average, and should remain constant if there is no carrier shift.

Throwing a selector switch also introduces a second crystal rectifier which allows the operator to check the audio peaks of the modulation envelope, so that the symmetry of the audio frequency envelope may be measured. A reversing switch reverses the direction of this second rectifier, and also reverses the voltage across the potentiometer, so that either negative or positive peaks may be measured. Individual calibrating controls are used to set carrier level voltages, and modulation or audio content.

CONTINUITY METER

We have two types of continuity meter — one using a Vibrator, with its Chopper contacts in series with 22.5 volt Battery and a headset or speaker, and the circuit under test, and another using a relaxation oscillator. The first does a very satisfactory job, but uses vibrating contacts, which might become troublesome.

The second consists of a relaxation oscillator, wired in such a way that the circuit under test is a part of the already existing resistance. This means that when the leads are shorted together, that a certain pitch will be produced in the loud speaker. As resistance is produced between the test leads, the pitch becomes lower, and may be only a few beats per minute with extremely high resistances. This is of great value in checking leaky condensers, the formation on electrolytic condensers, open resisters, shorted condensers, etc. It consists of 120 volts of battery, a loud speaker with appropriate output transformer, a neon lamp, a condenser, a resistor, a switch and the two test leads.

DC AMMETER

The auditory ammeter is a potentiometer and a series resistance. If we have a potentiometer with one volt across it, and if we run 1 milliampere through a resistance of 1,000 ohms, there will be a voltage drop of 1 volt. The circuit is so arranged that the voltage across the potentiometer is nulled against the voltage of the resistance, as indicated by the DC chopper and headset at the center of the system. An additional calibrating resistance is connected in series with the potentiometer across a standard 1.5-volt cell.

The meters have ranges from several amperes to 0 1 micro - ampere, provided by switching in various resistance values from

less than 1 ohm to values of 10 megohms and higher.

The potentiometer is fitted with a calibrated scale, and a pointer, which may be read by the blind technician.

DC VOLTMETER

The DC voltmeter is a potentiometer and multiplier. The system thus far has been based on 1 volt across the potentiometer, with a multiplier having any desired sensitivity from 1,000 ohms, to 1 megohm per volt, or higher.

The potentiometer is connected across a battery of 1.5 volts in series with a calibrating resistance, to adjust the voltage across the potential to 1 volt. The bottom of the multiplier is connected common to the battery and to the bottom of the potential. The one volt point on the multiplier goes through the null indicator, to the arm of the potentiometer. This null indicator is the vibrator type chopper, and headphones in series. The amount of resistance in the multiplier depends upon the voltage to be measured and is adjusted by means of the range switch.

The scale on the potentiometer is Brailled, and fixed with a pointer knob, and values from less than 0-1 volt to several thousand volts may be read with accuracy as good as the resistances which make up the multiplier, or by a factor determined by the linearity of the potentiometer. It is possible to obtain accurate as 1 per cent or better with resistance bridge, voltmeters and ammeters of this type.

FIELD STRENGTH METER

This piece of apparatus does not depend for its operation upon a null or balance or absence of sound in the headset, but rather it depends upon a change in pitch.

The circuit is made up of a power output pentode vacuum tube, with its grid and screen tied together, making it a high mu triode. Under these conditions, the DC plate resistance from plate to cathode is extremely high, with zero bias applied to the tube's grid. This resistance is used as the resistance element in a relaxation oscillator, and is shunted by an appropriate condenser. The tube's DC plate resistance and a neon lamp are connected in series with a headset and about 90 volts DC. The grid is connected to a crystal rectifier, which may be either tuned or untuned. When the signal received by the crystal causes the tube grid to go positive, the DC plate resistance decreases, thus producing increase in the pitch as heard in the headset. The device may be used as an absorption type wave meter, or as a tuning indicator, etc.

GRID DIP OSCILLATOR

This is a grid dip meter, without a meter. It consists of the standard Collpitts oscillator, plus a multi-vibrator, operated at audio frequencies. The bias for the multi-vibrator is furnished from the grid circuit of the RF oscillator. When using the dipper as a resonance indicator, the circuit to be measured will absorb power from the oscillator tank, and the grid bias of the RF oscillator will decrease, causing a decrease in grid current. At the same time, however, the bias applied to the multi-vibrator will also decrease, and the pitch of the signal will decrease in the headset. The output of the vibrator is connected to a headset.

The condenser in the RF oscillator is calibrated with a Braille scale from zero through 10, and charts are made for the various plug-in coils. This is another instrument which depends upon a change in pitch for its operation. This will check circuits from 500 kc., to 250 mc., and higher.

HIGH IMPEDANCE LOW VOLTAGE AC VOLTMETER

This insrument uses a potentiometer and multiplier with a sensitivity of 100,000 ohms per volt. The rectifier input to the meter is a full wave bridge type, using four type IN34 germanium crystals. With this arrangement, the condenser may be made smaller, thus increasing the sensitivity, as well as increasing the peak inverse voltage of the rectifier system, and therefore permitting the user to read higher AC voltages. This meter is also peak reading unless the voltage across the potentiometer is raised, to make the device indicate R.M.S. The potentiometer and multiplier are standard, with the chopper and headset used to indicate the null or balance. This meter reads to 50 volts peak.

INDUCTANCE BRIDGE

This instrument is a wheatstone Bridge, and compares a condenser with an inductance. The null indicator is a 1,000 cycle hummer, and a headset connected at the center of the bridge.

The instrument is so calibrated as to read various inductance ranges, and the scale reads from one tenth to the full value of any particular range setting. Values of inductance from 100 microhenry to 1,000 henries or higher may be measured.

MULTI-METER

This instrument combines the Wheatstone resistance bridge, milliammeter, and DC voltmeter. The instrument is also designed to read peak AC volts. In the model made for distribution to blind technicians throughout the country, the voltmeter is designed to read from 0-1,000 VDC, with a sensitivity of 20,000 ohms per volt, from 1 ampere to 0.1 microampere, and from 0-10 megohms. However, the original model meter is designed to have a sensitivity of 100,000 ohms per volt.

OHMMETER

This device is a Wheatstone Bridge, having standard resistances in multiples of 10; 1, 10, 100, 1000, 10,000, 100,000, 1 megohm, 10 megohms, etc. However, the null indicator is not the usual galvanometer, but rather, a headset in series with a chopper between bridge centers. The chopper is a 2 volt-synchronous vibrator, using two of its breaker points as the interrupter. The variable arm of the bridge is a linear rheostat, with a Braille scale, calibrated in 10 equally spaced main divisions, along with subdivision markings. The bridge has been so designed that it is possible to read from one tenth the full scale reading or rather one-tenth the known resistance in the standard arm to the value of the standard. By using a selector switch, various standards may be put into the circuit. A means is also provided for checking resistances above one megohm, by introducing a high voltage across the bridge. All 1 percent resistors have been employed, along with a linear potentiometer, so that the accuracy is extremely good.

RELAXATION OSCILLATOR

In this type of capacity checker, a relaxation oscillator, consisting of a high voltage battery, a neon lamp, a resistance and capacity in parallel, and a headset is used to compare the capacity of unknown condensers with standard capacitances such as the common condenser decade. The terminals for the condenser in this oscillator are brought to the outside of the box, and may be connected to the unknown condenser or to the standard. The pitch of the signal in the headset is used as the basis of comparison. If the pitch with two given condensers is the same, the capacity of both are about the same. If they are different, the higher pitch is the smaller capacity, and lower pitch is the larger. Thus we may compare two condensers, for capacity, and for leakage, for if the leakage is excessive, the device will not oscillate.

This device will measure from about 100 mmf., to about 100,000 mmf. It will not check electrolytics.

RF AMMETER

This instrument is made up of a potentiometer connected across a 1.5-volt battery, in series with a calibrating resistance. The current to be measured is passed through a known value of resistance, is rectified by a crystal diode, and then filtered by RF chokes in each side of the rectifiers output, terminated in a RF by-pass condenser, shunted by a large condenser so that the filtering will also be good for low frequency AC. If the resistance in series with the current to be measured is non-inductive, the device will be fairly satisfactory for RF currents, although probably not as good as a thermo-couple type. The larger the resistance, the smaller the current which may be measured. The resistors are not switched in, but are connected as needed. The device will measure from a few micro-amperes to many amperes, depending upon the value of the resistance shunted across the terminals.

The null indicator is the chopper and headset from the arm of the calibrated potentiometer to the top of the rectifier output. The meter is fitted with the standard Braille scale, and pointer. The chassis is isolated to avoid RF burns.

STROBOSCOPE

It consists of a photo cell in a light proof housing, arranged so that light coming back to the cell must be reflected from the strobe card. The output of the cell feeds an amplifier, and produces a signal in a headset, equal to the power line frequency, when the turn table is synchronized. This signal is beat with a small amount of power line frequency injected into the amplifier from the power line, and the beat between the two signals is observed. If there is a "wow" and putting a load on the table brings the two signals into step, the table is fast. If the "wow" becomes greater, the table is slow.

A discriminator type of circuit reads directly whether or not the table is fast or slow, and just how much.

VOLUME LEVEL METER

The volume level meter consists of an amplifier, with a head set and a neon lamp or

a thyratron as a load circuit. Each of these loads is fed from an individual secondary common to the same transformer primary. When the tube ionizes, severe distortion occurs in the headset, since the load in the tube's plate circuit is greatly reduced. Thus we have a peak reading AC level meter. The input to the stage is high impedance, and is arranged with a gain control calibrated in DB The apparatus also serves as a monitor so that the content of the program may be checked.

VACUUM TUBE VOLTMETER

While it would be quite possible to build an auditory VTVM, a standard commercial instrument is used and an ammeter built with a range and sensitivity equivalent to the meter movement in the instrument. A jack is provided so that the auditory meter can be plugged into the instrument, or the instrument can be used by sighted technicians at the same time.

TRAVEL AT THE MICHIGAN SCHOOL FOR THE BLIND

By FRANCIS F. HETHERINGTON

One of the greatest needs of the blind and partially sighted individual is increased and better travel ability. A course in travel would help alleviate some of the difficulties experienced by the visually handicapped person. The areas in which the needs may be found are as follows: 1. Physical health. 2. Mental health. 3. Social activities. 4. Economic opportunities. and 5. Independence.

Physical health. It is said that you can tell a visually handicapped person by his posture. Due to the lack of vision the person has a tendency to bend forward from the hips with the head and neck carried well forward causing a slumped chest and in some cases a structural deficiency. Goldthwaite[1] suggest a strong relationship between posture and circulation and indicates that good circulation in the vital organs is impossible with a slumped chest because of resultant poor breathing and mechanical blockage. The bumps, bruises and skinned shins, characteristic of the visually handicapped are caused, for the main part, by incorrect travel. The aspect of injury by automobiles, trees, sidewalk construction, open manholes, and other such obstacles can be greatly reduced by proper techniques and instruction in the use of the cane. Much of the muscle tension, caused by the uncertainty of what lies before him, can be eliminated through increased travel ability and confidence in his movements.

Mental Health. The mental health of a visually handicapped person is greatly influenced by his ability to travel. The blind have an inherent fear of bumping into objects thus they are most always under a nervous and mental strain. Their muscles are tense waiting for the jar which comes when they collide with an object. There are those few blind people who are so well endowed with natural energy and confidence that no special motivation or instruction ever seems necessary. They seem to travel without effort and with confidence and as a general rule it is those people who are the better adjusted of the total group. For the majority of the blind, instruction is necessary and the more proficient and independent a person becomes his mental health improves accordingly. There are many "blocks" which tend to hinder travel instruction. It may be an overly protective parent, the fear of getting lost, the fear of injury or it may be a false sense of pride in not using a cane. Whatever the "block" may be it must be removed from the person's mind before any instruction or travel technique will be adequate. The fact that the opportunity to teach travel to children in residential schools presents itself, makes it possible to develop the habitual attitudes and to remove many of the previously mentioned blocks.

Social activities and independence. The individual who travels well, safely, and with confidence is the individual who enjoys the

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1. J. E. Goldthwaite, *Body Mechanics,* J. B. Lippencott Company, 1934.

wider range of social activities. He is usually the person who is a good mixer and has the desire to associate with people of normal vision. He enjoys greater independence because he can go to social activities without being dependent upon someone to take him. He is usually not the type who is content to sit in a chair beside the radio and let the days drift by. The enlarged area of social activities made possible through increased travel ability tends to make for a more well rounded individual. This being one of the aims of education it is as highly desirable for the blind as well as for the normal sighted.

Economic opportunities. One of the goals of the blind and partially sighted student is employment and the opportunity to advance and take their place in society as an individual. The degree of travel is becoming more and more a vital factor in the placement of the blind. The blind are today engaged in vocational occupations which not too long ago were considered impossible for them to do. They have shown that they can overcome their handicap and can work side by side with their fellow man. One of the first questions asked by a prospective employer is "can he get around and take care of himself?" Many times a person who is qualified for a job cannot be considered because he is dependent upon other people for getting to and from work. F.W. Ave-Lallemant[2] cites a case to illustrate this problem. "A young lady well trained and qualified as a transcribing machine operator came to the placement office. She was given a job in a government agency and arrangements were made for her to share in a 'car pool.' She did splendid work and received salary advancements and the praise of her employers. After the war the 'car pool' was disbanded. The employer called and said that because of her inability to travel she was unable to get to work even though she lived but six blocks from the office. She was in danger of losing her job and only through an intensive course in travel techniques, which according to the young lady, she had never received in ten years of attendance at a residential school, was she able to retain her position. Such a case as this is by no means isolated. Everywhere there are many others confronted with the same problems. According to the placement officer[3] of the Services for the Blind in Michigan, "it is practically impossible to place the visually handicapped in a position unless he is able to travel to and from work. He must not only be able to produce or a level equal to that of the sighted person, but he must also be independent and not a safety hazard."

To find out whether or not our felt need for a course in travel was local or nationwide, a questionnaire was sent to all of the state Schools for the Blind in the United States. There are forty States that sponser such institutions. A total of twenty eight schools reported. Of the seventy percent reporting eighteen thought a course in travel would be important, seven did not answer the question and three were negative indicating that 64.28% of the administrators in Schools for the Blind believe such a course is important to the overall education of the visually handicapped child. Ten schools report they have a course in travel now in operation while eighteen have no such course. Five of the ten schools offering the course require that the course be taken while four schools allow it to be optional. One school did not answer the question.

The number of hours per week spent in travel instruction varies from one to five hours. The number of students per instructor varied from one to seven. The mean being 3.1 plus per instructor.

Of the ten schools having travel course in the curriculum, eight reported favorable results. One school reported that the course had not been in operation long enough to evaluate accurately and one did not answer the question.

Who teaches the course: The course at the Michigan School for the Blind is taught by the physical education instructors who work in cooperation with the instructors of the social living classes, the blind teacher personnel and the Division of the Services for the Blind. The actual cane technique is taught by the physical education instructors. The social living teachers handle that part of the course in which outside speakers are asked in to discuss needs for travel in relation to safety, mental health, physical health and economic security as well as courtesy to the general public. The blind teacher personnel is utilized for teaching sound interpretations, some phases of muscular memory and those tricks of the trade which only one who is blind can know about.

2. F. W. Ave-Lallemant, "Travel Techniques Should Be Taught in the Residential Schools," American Association of Workers For The Blind, 1947, pp. 79-80.

3. Willard Preen, Chief Employment Counselor, Division of the Services for the Blind.

The Services for the Blind are asked to contribute speakers, canes, and information related to job training and the degree of travel necessary to retain the position.

The amount of time spent with each individual student on various phases of travel vary due to the individual differences of the students. There are some who absorb instruction readily, have excellent memories and coordination while others will take longer to absorb the same amount of training. The important factor being that sufficient time is made available to the instructor and student. We like to have our students thirty minutes per day five days a week with the students practising after school hours and week-ends.

Aim of the Course: To improve travel ability of the blind and partially sighted students to the degree that each individual receiving the training will become as independent as possible, have a knowledge of safety procedures, be able to meet the travel requirements of prospective employers and to eliminate some of the mental and physical health deficiencies common to the visually handicapped child.

Objectives of the Course:

1. To develop the willingness to use the white cane.
2. To give all students who need it a thorough standard course in travel techniques.
3. To establish standard procedures for using a human guide.
4. To create an awareness of various aids such as terrain, smell, sounds and their uses.
5. To establish muscular memory importance and uses.
6. To emphasize safety procedures in residential and downtown areas.
7. To improve posture.

The course we are now using is composed of seventeen lessons. Ten lessons which the student must show proficiency in before he may begin the final seven lessons which deal with travel in the downtown area. The preliminary ten lessons are in areas such as Orientation, Guide Travel, Sound Interpretations, Muscular Memory, Use of the Cane and cane techniques, Posture and relaxation, Safety, and the Use of Specific Routes for travel practice. The final lessons are concerned with Safety, Traffic light instruction, Layout of city streets and main line of traffic, Use of city busses, Travel in the downtown area and a Final examination. The final examination consists of the pupil acting as a guide for the instructor. He will be assigned to a specific route in which he will have to use the city busses, make proper use of traffic signals, enter accurately four business places named earlier, and return back to the campus.

Evaluation: The results we have observed are very encouraging. Students who were very limited and dependent in their activities show more initiative and independence. They travel to and from familiar and unfamiliar places with confidence, speed, and safety. They appear to be more relaxed and seem to have developed an awareness of the many aids such as smell, sound, muscular memory, terrain, and how these aids can be used to their advantage. The attitude of the students toward using a white cane has changed so that they now do not feel self conscious. There are now many students, who formerly never left the camups without a sighted guide, now traveling on their own and traveling well. We have older students taking courses in the public high schools in Lansing, which in many cases means traveling by bus, crossing busy thoroughfares, transferring to another bus before reaching their destination. We have students asking when they can take the travel course which is a good indication that one of the mental blocks has been overcome.

Conclusion: The results we have observed are encouraging and indicate that the course is important to the overall education of the blind and partially sighted child. The replies received from the questionnaire indicates that a majority of the administrators in these schools feel that such a course is important. The schools that have such a course in their curriculum have indicated that they have observed beneficial results while a majority of the remaining administrators reported they considered a travel course important and would like to do something toward making the course available to their students.

We believe a course in travel should be compulsory and that if sufficient time and number of instructors are made available, the students will benefit to a large degree. Through instruction in proper techniques of travel the mental health and physical health of the students will be increased. Also, the economic opportunities will be enlarged for the students if they can meet the travel and safety requirements of prospective employers. Correct travel will broaden their social activities field and will materially aid their chances of taking their place in the sighted world in which they must live.

BRIGHT HORIZONS OF HOPE IN TURKEY

By MITAT ENC

During the last twenty-five years Turkey has concentrated its major resources and strength in reducing illiteracy. Now the government is turning its attention to the problem of differential education. The Education Act of 1913, which marked the real beginning of compulsory elementary education in this country, contained certain clauses in connection with the education of blind and other handicapped children. However, the Ministry of Education could not make any real effort to assume this responsibility, because the burden of organizing the compulsory education of a neglected empire was too gigantic a job. Only in 1923 after the Ottoman Empire and the organization of the new state, did the Ministry of Health and Social Welfare take over a school for the deaf and blind in Izmir. This school had been started by a voluntary society. The history of education in Turkey shows that in the nineteenth century a few philanthropic societies attempted to establish schools for the blind but various reasons made it impossible for these schools to take root and develop.

The school in Izmir remained for twenty nine years under the auspices of the Ministry of Public Health and Social Welfare but did not develop sufficiently to comply even with mediocre standards of education for the blind and deaf. The reasons for such static conditions are apparent: the ministry of health was not able to attack the problem primarily as an educational one, and could not solve the problem of qualified staff, attempting to run the school with medical specialists. Because of the relative ease of giving training to the deaf, particularly in reading, writing and learning trades, the enrollment of the department of the blind never exceeded thirty students and during the last twenty-nine years only about 32 blind students graduated from the school.

Most of these graduates were not able to become productive and self-supporting citizens, because the training in the school consisted of only teaching a musical instrument to those talented and provided them with an insufficient knowledge of elementary subjects. The matter of Braille school books was not solved. In fact, there were not any books at all in Braille. Thus, learning to read and write did not seem to have any practical place in the education of the blind.

After many trials and errors the Ministry of Education decided to transfer the school in Izmir to the Ministry of Education in 1951. As soon as the Ministry of Education took over the school the deafmutes and the blind were separated. Blind students were transferred to the newly opened school for the blind in Ankara. This new school contains a kindergarten, an elementary school and next year the junior high school with its vocational training department will be established.

The Ministry of Education is providing opportunities for intelligent and talented students to go to conservatory, lycees, and other institutions of higher education, after their training is completed in the schools for the blind.

The vocational opportunities are rich in Turkey for the blind: because the machine has not yet extensively substituted the hand. The new school is studying different possibilities now for next year.

The other major news of the field is the organization of the field of handicapped children in general and opening a department to train teachers for the field of handicapped children at Gazi Teachers Training College in Ankara. The new school for the blind will have close contact with the teachers training department and next year will move to a new building close to Gazi Training College to make cooperation and research easy.

As soon as the department begins to graduate its students the Ministry is planning to establish a second school in one of the South Eastern provinces of Turkey where trachoma, the major cause of blindness in this country, is most prevalent. On the other hand the voluntary services, which began to flourish during the last few years, are being regulated to bring some law and order into their activities: close to ten different societies are active in the field.

Mitat Enc is connected with the school for the blind in Turkey, ***Ankara korler Okulu ve yetistirme yurdu,*** Ankara, Turkey.

Their main activity consists of collecting public contributions and dividing the fund as best as they can among the needy handicapped. This type of activity, of course, is not very constructive, so that some of the more purposeful and clear sighted societies are attempting to separate the welfare problems of the deaf and blind and organize a federation which will be the only authority to collect contributions and divide it among the societies according to the worthiness of their purposes and the extent of their activities.

The new school for the blind is preparing to cooperate with one of these voluntary societies called THE SOCIETY OF SIX DOTS FOR THE BLIND, in order to establish workshops and seek vocational opportunities for its graduates of the future.

Another major problem of the new school is the establishing of a printing press to publish text books, other books and possibly a monthly Braille magazine. The school has already begun to issue a handwritten weekly school periodical which is managed by the students. It is called THE SEEING HANDS. The name was suggested by the students.

The school is very short of every kind of necessary teaching materials at the present and our American friends are very generous in offering assistance: The New York Institute for the Education of the Blind, in a letter from its director, Dr. Frampton, has offered help in anything the Turkish school needs. The American Foundation for Overseas Blind donated forty slates and styli and also agreed to print maps of Turkey without asking any payment. The Ministry of Education has made a request to the Bureau of Technical Aid of U.N.O. for a printing press and other teaching materials. So after these materials start coming in, the main difficulties of bringing effectiveness to teaching will be solved.

In short, about sixty thousand blind of Turkey now look into the future with hope of becoming productive and respectable members of the society of their country and the world.

A REQUEST TO ALL THE SCHOOLS FOR BLIND IN U. S. A. AND OTHER COUNTRIES: The new school for the blind in Turkey needs the curriculums, yearly reports, and other publications connected with teaching and education of the blind in order to get acquainted with new experiments and developments in the field and to benefit in directing its activities. If such material is sent to the following school address from any school in any part of the world, it will be very much appreciated.

The address: Ankara Körler okulu ve yetistirme yurdu. Ankara, Turkey.

ON THE PSYCHOLOGY OF THE NEWLY BLINDED

By EMMA ZALADUK

The First Phase:

When blindness is the result of a prolonged eye ailment, the patient has during the period of treatment devoted much thought to the possibility of losing his sight although he hopes until the very last moment to escape the sentence of life-long darkness. However, the crisis confronting the suddenly blinded, by virtue of its unexpectedness is bitter and difficult. Only yesterday he moved about freely from place to place, there were no obstacles or impediments in the city streets, in the hills, in the valley and in the fields. He saw the brightness of the sun, the clouds in the sky, the colors that cover the earth, the movement of each living thing; all paths were open to him in the freedom of his sight. Suddenly the world stands motionless before him; he must sit still and from afar only listen to the rhythm of movement. For him the cadence of life has ceased. There is only sound, darkness and dependence. He experiences the anguish accompanying the abandonment, at least temporarily, of his position in society. In this seeming arrestment of creative powers and abandonment of position it is natural for him to rebel. The substitution of stagnation and dependence for activity and freedom envelopes the spirit of the newly blinded with terror.

Emma Zaladuk was born in Lithuania and was blinded at the age of eleven as a result of an illness. She received her Doctorate from the University of Marburg and went to Jerusalem in 1936 to direct the Jewish Institute for the Blind.

Up to the time of his misfortune, he like most men attempted to devolop his creative ability to the maximum degree, and in this process he demonstrated in most instances his solidarity with society. The misfortune destroys not only his sense of accomplishment and security but also his sense of alignment with society; he finds an utter void within himself. In this vacuum he is overwhelmed by the degree of his misfortunate and the grotesque changes in his life. His sorrow is so intense that he feels himself unable to bear his affliction and at this tragic point it is characteristic for the suddenly blinded to seek release and freedom in death.

Another aspect of the tragedy is the intensity with which the individual reacts to his inability to record new visual impressions, to the removal of pleasure experienced in aesthetics that one enjoys in nature's revelations, in the arts, in brief, in all of life's manifestations. The seeing-eye is able to enrich itself with the beauty of the world. Often the newly blinded is subjected to greater yearnings for the beauties hidden from him, for the lost opportunities to enrich his visual impressions, than to regrets for loss of position and status in society as he knew it. The remaining senses do not adequately compensate for the impressions he gained visually. When the visual aid for recording impressions is no longer functioning, the blinded remains with only limited possibilities to recall to his consciousness impressions previously accumulated. During the early stages of transition between the light and the darkness his wealth of recollections comes to him readily and in its entirety. He lives in accordance with these impressions, and his recorded impressions visualize for him clearly each object as he knew it. In this remembered world his process of imagination and his thoughts are still attuned to the sighted world. During this period his recorded impressions do not deviate from the actual and his recollection of objects is not yet circumscribed as it will become with the passage of time.

Generally speaking, psychologists have not yet recognized the first stage which is not even clear to the blinded himself who is confounded by an inward conflict of light and shadow source. Light now comes from within himself and shadow reaches him from the outer world. Only after a patient adjustment to his sightlessness is he able to grasp and understand, to a limited degree, the manifestations of this stage.

The Relationship of the Newly Blinded to his Remaining Senses:

During the first period of conflict he is filled with bitterness and his reactions and attitudes are foreign to the normal person. He claims his place in the sighted world and in the beginning rejects any thought of the new orientation required of him. He clings to the light and it is as if he would command his remaining senses not to intensify their normal functions. Because of this, and because of the fear of the unknown which involves him in groping his way about, he avoids all activity and motion beyond his most immediate needs. He shuns acquaintanceship with new surroundings, walks, meetings with friends or strangers, visits, attending concerts or the theater which demand of him cooperation from his remaining physical faculties. The intensification of activity of the remaining functioning senses would signify acknowledgment of his changed condition and his identification with the blind. At this time he reveals strong negative reactions to educational institutions for the blind and for the actual achievements of the blind, all of which is as yet a world apart from him.

Dr. Moshe Lunz, one of the founders of the Jewish Institute for the Blind in Jerusalem, who lost his sight at the age of twenty, wrote from the hospital in Vienna that at the first state of his blindness, the very word "blind" caused his "blood to run cold." For a long period of time the newly blinded is unable to utter the word "blind." With all his being he clings to the light; his very soul cries out for the brightness; he is inexhaustible in his search for sight. He wanders from hospital to hospital subjecting himself to a long series of operations. This unwavering quest exposes him to hope and despair and hope again that at last he may regain his lost world. Firm in his faith, he waits patiently; his hope is shattered by disappointment and anguish gnaws at his heart. Again and again he seeks the ray of light to be found in successful experimental operations, often in the face of the physician's hesitations. Thus light and shadow fill the extremities of his narrowed world.

A new chapter of orientation and adjustment begins for his friends and relatives. The tragedy is apt to change their lives entirely. The breadth and form of these changes depend almost exclusively on the character and intelligence of the patient. There are those who are able to restrain themselves and re-

frain from giving expression to their suffering and others whose unleashed bitterness knows no bounds and in these cases they drag those surrounding them into the depths of their pain and the abyss of their despair.

Rehabilitation:

It is well known that many blind persons are successful in their activities and in the fulfillment of important tasks in life generally and in their personal lives. However, frequently the adjustment of the newly blinded comes about only after a complicated process. The factors responsible for his awakening are many and varied, and it is impossible to subject them to a single analysis. One common factor is annihilation of the energy required to reject his state of blindness after all of his efforts to escape the darkness have been unsuccessful. His spirit is fatigued and this fatigue is exploited by the persons in contact with him — his doctors, his friends and other blind individuals who with much effort, struggle, and investment of time have found their way back to life. During his stay in the hospital attempt is made to direct his attention away from the world of light and to persuade him of the necessity for orientation. His interest is slowly aroused in institutions for the blind where appropriate methods of education and vocational guidance exist to accommodate his needs.

In many cases when advice to redirect the course of his life is given by his own physician it will bring about negative results. He came to the doctor in his quest for light, as if the physician had stored within himself this very treasure. The blinded has rested all his hope in his belief that the physician will restore his sight. With the first suggestion implying that he has been permanently cut off from the lighted world, the looming abyss from which he has been seeking refuge opens before him. However, there are cases where such advice given by the doctor has met with great success. The success depends largely on the attitude of the doctor, his ability to penetrate the psychological make-up of the patient and the amount of time he is able to devote to the task. At this state of passive resistance, there is a more positive reaction to help extended by another who is already blind, one who has experienced the crisis.

Abroad as well as in Israel, blind workers are sent to the homes of the newly blinded, to civilian and military hospitals. These experiments have proved that meeting and discussion between the blind and the newly blinded were the most important factors in activizing the latent abilities of the newly blinded. Despite the fact that the first efforts are accompanied by many difficulties, often by example and stories about the achievements of the blind, the newly blinded is rescued from his state of lethargy, that is to say, when the creative possibilities within his new life are revealed to him.

Training and Work:

The first moments the newly blinded crosses the threshhold of the institution are the most tragic. With a timorous heart he enters the house which will serve him as a bridge between himself and his new world. He summons all his strength to meet this new strange life. However, in a very short time he is surprised by the creative ability and the work he finds there, most of which is almost unknown to the people on the outside. Until this period he, like thousands of others, passed such institutions and did not realize nor imagine that in these remote places important tasks are being performed, that there are tremendous opportunities within these buildings for education, spirit, music, work and creative expression. The process of adjustment of the newly blinded to his new requirements do not seem especially difficult and the tempo of adjustment is not as slow as he had supposed it would be.

Naturally for the man who was accustomed to performing his tasks by the aid of sight, it is obvious that it will be much more difficult for him than for the child born blind or the one blinded in early childhood to perform his tasks by the aid of the sense of touch. From then on the world is known to him through his fingers, these fingers which have not yet acquired that sensitivity which is acquired by those blinded in early childhood. However, he has many more advantages than the latter. His perception of things is guided by his store of fresh impressions of the fullness of the measurements, and the grasping of size and space are easier for him; his walk, movements and his carriage are very different.

Generally, the newly blinded adult is not adaptable to all the branches of industry and education which are offered in the institutions for the blind. He concentrates especially on the different types of work offered by the workshops, for example, basketry, brushmaking, weaving and spinning. He learns to use Braille, reading by the sense of touch. It is

found, however, that the sense of touch of the newly blinded who has engaged in hard physical labor, often up to the time he has lost his sight, has been dulled by the coarsening of his skin in the performance of his work. On the other hand the younger newly blinded individual has the opportunity of entering completely into the structure of the institution, to acquire an education, to obtain excellent vocational training and to study music.

Despite the fact that the first phase of his education is accompanied by many difficulties, this period, with its varied program is considered to be the most agreeable, comparable to the school years of a child. During this period he is not concerned with earning his living. Only on leaving the institution do problems of daily living begin to plague him.

By the time he is ready to leave the institution his pattern of life has changed completely. He has again become a productive person who is seeking means of sustenance on a par with other working men. Despite the fact that he faces difficulties and opposition on all sides, his desire to overcome the obstacles has been strengthened. Of course there are low periods when he is plagued by his handicap, but his work and the strong desire to be productive help him to overcome these phases of dejection.

Abroad, where the rights of the blind are protected by law and where his achievements are recognized, he has numerous fields of endeavor open to him. Many of those who lost their sight in battle found their way back to the high schools and universities and upon completion of their studies took up their posts in creative and productive enterprise. They entered various industries, hospitals, etc. Many hospitals and clinics express a preference for the services of the trained blind in their physical therapy departments, in consideration of their particular aptitude resulting from their developed sense of touch. In all the progressive countries where the creative ability of the blind is recognized there is no hesitation in employing his talents in productive work. In offices the blind are employed as stenographers, typists and telephone operators. It is our hope that one day Israel will be able to offer wider vocational training to her blind in order that eventually a larger field of em ployment may be opened up before them. It should be emphasized that the blind can under favorable conditions develop his native talents to encompass a wide field.

RESEARCH IN GREAT BRITAIN

By J. N. LANGDON

Although schools for the blind in Great Britain have in general reflected developments in the main field of educational theory and practice, they have remained almost unaffected by the increasing use in ordinary schools of standardized tests of capacity and achievement. This is no doubt partly because the situations which such tests have been designed to meet are much less urgent in schools for the blind, where classes are small and teachers can study every pupil individually, but it is mainly due to the difficulties of standardizing tests on a population so small — approximately 1300 blind children between five and sixteen years of age — and so heterogeneous as to make it desirable to test every child in the appropriate age group in every school in the Country if there is to be confidence in the results. As it seems, however, that sampling difficulties are only a little less acute in the United States, where so much excellent work has been done in standardizing mental and scholastic tests for the blind, a further explanation must be sought for the backwardness of Great Britain in this respect. This is readily forthcoming when it is realized that research which must accumulate such widely scattered material needs to be centrally directed and will proceed very slowly without a few workers in a position to give it much of their time and energies. These essential conditions have been lacking

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in Great Britain, where until very recently and with the exceptions now to be mentioned, no central organization had assumed any responsibility for research, and no full-time workers had been engaged.

In 1932 a Joint Committee of the College of Teachers of the Blind and the National Institute for the Blind engaged a psychologist to make a preliminary survey of the mentality of blind children, but this enquiry was not carried to a conclusion.

In 1945 Dr. Winifred Langan, who had been working under the auspices of the Burden Mental Research Department, published her adaptation of the 1937 Terman-Merrill Revision of the Stanford-Binet Tests. Dr. Langan had restricted her research to children without useful sight, and she had devised substitute tests for those in the original which were expressed in visual situations.

In 1948 the National Foundation for Educational Research appointed Miss Myfanwy Williams to work on an enquiry, which they had undertaken at the request of the Ministry of Education, into the validity and reliability of the "Langan Adaptation," which was becoming increasingly used by teachers. Miss Williams has tested practically the whole blind school population, including the large number of children with varying degrees of sight, and a report on her results is awaited.

In 1950 a Sub-Committee of the College of Teachers of the Blind took the first steps to obtain an objective measure of attainment in Braille reading. Approximately 250 children over nine and under fourteen years of age were tested in a "pilot" experiment, the results of which were analyzed by Dr. Wall and published in the "Teacher of the Blind" for February, 1951. Experience gained in this experiment is now being used to guide procedure in a programme involving the annual testing of all children in the appropriate age groups throughout the Country.

From the foregoing it will be seen that British research in this field has with one exception been limited to intelligence testing and that even this has lacked the unity of direction which would have been desirable. It was in these circumstances that the College of Teachers of the Blind resolved in 1951 to set up a Research Council charged with the duty of initiating and co-ordinating research into matters affecting the education and welfare of the blind.

The Council is fortunate in having among its members Dr. W. D. Wall, Reader in Education and Head of the Department of Remedial Education in Birmingham University; it also includes three trained psychologists. It will be noted that the Council's responsibilities are limited to initiation and co-ordination, for it controls no staff and its members are all fully occupied with other duties, but it is hoped that it will prove an effective agency for suggesting to individuals — both research students and teachers — the problems which they can most profitably explore, for co-ordinating their activities, and for collating and making known their conclusions.

The Council is particularly concerned to collect information on the problems noted below and would gratefully welcome any relevant communications from research workers:—

Intelligence Testing of the Blind.

Attainment Testing of the Blind including Braille Reading.

Personality Testing of the Blind.

Space Perception of the Blind.

Number Concepts of Mentally Sub-Normal Blind Children.

Problems of Social Psychology of the Blind.

Causes of Compulsive Movements and Other Undesirable Motor Habits in the Blind.

MEETING OF CONSULTATIVE COMMITTEE IN PARIS FOR THE CREATION OF A WORLD BRAILLE COUNCIL

Left to right: An unidentified secretary; Sir Clutha Mackenzie - France; Pierre Henri - France; The Reverend Luka Po-kae - Burma; John Wilson - England; unidentified secretary: Sayed Abdel Fattah - Egypt; Ibrahim Mahmoud Ghassebah - Iran; Milos Licina - Yugoslavia; Paul J. Langan - U. S. A.; an unidentified interpreter; V. H. Vaughan - Union of South Africa.

REPORT ON THE CONSULTATIVE COMMITTEE FOR THE CREATION OF A WORLD BRAILLE COUNCIL

By PAUL J. LANGAN

The Executive Board of UNESCO at its 28th session in October 1951 authorized the Director-General to establish provisionally a World Braille Council attached to UNESCO in the form of an Advisory Committee. The Director-General was also authorized to summon a committee of experts to advise him on the composition and the role of the proposed Council.

The Consultative Committee for the creation of a World Braille Council met in Paris from December 10-12, 1951. It was composed of the following members:

President: Professor Suniti Kumar Chatterji, Head of the Department of Comparative Philology, University of Calcutta, India.

Vice-Pres.: Mr. Pierre Henri, Professeur a L'Institut National des Jeunes Aveugles, Paris, France.

Members: Bey Mitat Enc, Professor, Teacher Training Institute, Ankara, Turkey.
Sr. J. Ezquerra, Jefe de la Organizacion Nacional de Ciegos, Madrid, Spain.
Mr. Sayed Abdel Fattah, Inspector-General, Schools for the Deaf and Blind, Cairo, Egypt.
Mr. Ibrahim Mahmoud Ghasseebah, Principal, Queen Huzeina Institute, Baghdad, Iran.
Mr. John Jarvis, Braille Secretary and International Corespondent, National Institute for the Blind, London, England.
Mr. Paul J. Langan, Chairman, AAIB-AAWB Braille Committee, Superintendent, Kentucky School for the Blind, U. S. A.
Mr. Milos Licina, Vice-President de L'Association des Aveugles de Yougoslavie, Belgrade, Yougoslavie.
Sr. J. Pardo Ospina, Director, Federacion Nacional de Ciegos y Sordomudos, Bogota, Columbia
The Reverend Luka Po-kae, Superior, School for the Blind, Kemmendine, Burma.
Mr. George L. Raverat, European Director, American Foundation for Overseas Blind, Paris, France.
Mr. V. H. Vaughan, Principal, Boys' School for the Physically Handicapped, Kimberley, South Africa.
Mr. John Wilson, Secretary, British Empire Society for the Blind, London, England.
Mr. T. Yoshimoto, Former President of the Japanese Federation of the Blind, Japan.

In the course of its six meetings, the Committee prepared draft statutes of the future World Braille Council for submission to the Director-General; made suggestions as to methods of work of the Council and the tasks which it should undertake; and suggested names of specialists on Braille who should be invited to become members of the Council.

The Committee recommended that the World Braille Council programme should include the following matters: music notation; mathematical and science symbols; the compilation of an international catalogue; the establishment of regional councils to deal, amongst other matters, with contracted Braille, and assistance in the continuation and coordination of uniform Braille systems for the African and South East Asian languages. Considering that the principal of the Braille script is to reflect as far as possible the alphabet and orthography as used by the sighted for a particular language, the Committee divided the world languages into eight zones:

I Languages of Europe and of Euroepan origin using Roman and allied scripts.
II Languages using scripts of Indian Origin.
III Languages using Semitic scripts.
IV Chinese.
V Japanese.
VI Korean.
VII Languages of Asia using the Roman script.
VIII Indigenous languages of Africa, Oceania and America using the Roman script.

The Committee proposed that the composition of the first World Braille Council should be of six members representing the various language zones, and three members chosen as specialists and technicians. The following names were suggested to the Director-General of UNESCO by the Committee and have been accepted and approved as the membership of the first World Braille Council:

Mr. John Jarvis, National Institute for the Blind, London, England.
Sr. J.. Pardo Ospina, Federacion Nacional de Ciegos, Bogota, Columbia.
Mr. Lal Advani, Ministry of Education, New Delhi, India.
Mr. Sayed Abdel Fattah, Cairo, Egypt.
Professor Li Fan Kuei, (Chinese, Japanese and Korean zones) Washington University, Seattle, Washington, U. S. A.
Mr. John Wilson, London, England.
Mr. L. W. Rodenberg, Illinois School for the Blind, Jacksonville, Ill., U. S. A.
Mr. Pierre Henri, Paris, France.
Sir Clutha Mackenzie, London, England.

Paul J. Langan is a member of the UNESCO Consultive Committee and attended the Paris Executive Board meeting in October 1951. Mr. Langan in Superintendent of the Kentucky School for the Blind, Louisville, Kentucky, and will be host to the A.A.I.B. convention to be held there June 30th to July 3rd, 1952.

It was the expressed hope of the Committee that the Director-General of UNESCO would soon convene the members of the World Braille Council and begin the important international work of this group. It was recommended in the statutes that the Council should meet at least once every five years.

THE BLIND IN THE HASHIMITE KINGDOM OF JORDAN

By S. T. DAJANI

The criterion of civilization in any nation is its standard of social services. Primitive man had no time to think of others even though they were his nearest relations. In fact, we actually know of communities where the old and the weaklings are either put to death or left to die in isolation because the earning section of those communities cannot afford to keep them. Social consciousness in a community is reached when individuals or groups feel responsibility towards the old, the weak and the handicapped. Social consciousness goes beyond feeling a responsibility; it drives those individuals and groups to institute ways and means of relieving the handicapped and helping them to live happily and contentedly in an environment in which each individual could utilize to the utmost his natural abilities in the belief that self-help is the best help.

The Kingdom of the Hashimite Jordan is a part of the Arab world, and its population shares the rich and varied tradition and culture of the Arabic language. During the Middle Ages social consciousness among the Arabs was strong and widespread. Welfare work was considered to be a self-imposed duty for every self-respecting individual who hoped to please his conscience by obeying the divine commandments. Every individual used to entail part or even all his property for social welfare work, but with the decline of the Arab world and the disintegration of its traditional values, ignorance with its corollaries of poverty, disease and intellectual serfdom ruled out all the amenities of refined, coordinated intellectual and social life among the Arab races, and, consequently every phase of welfare work has to be started from scratch. And blind welfare work is no exception.

Social conditions cannot be separated from political conditions, although they are mainly the product of economic progress. So long as the Arab peoples remain in a state of political fluidity and administrative semi-chaos, social progress will remain like a smouldering fire. It is to be hoped that all these trends will be coordinated so as to create a favourable balance which will in time bridge the gap between the prevailing extremes — an ignorant majority and an educated few, very poor masses and very rich, power-loving and shortsighted cliques. The spread of balanced education among the masses, if pursued with disinterested and steady zeal, is the only panacea for all ills.

The Hashimite Jordan, like most of the other Arab states, is a small country without any natural resources. Even if those resources existed, it will take time until they are utilized to the best interests of the communities. It is not surprising, therefore, to see that the conditions of the blind, in keeping with the general picture set forth, are not very dazzling or even promising.

Before the termination of the British Mandate over Palestine in 1948, the Arab population of Palestine and Trans-Jordan was about one million and six hundred thousands. Of these about half a million live outside the Hashimite Jordan at present. The number of blind Arabs, according to the 1931 census, was about nine thousand, of whom about four per cent were of school age. The overwhelming majority, of course, were old. The problem of coping with the education and training of the educable element has never been handled on a rational basis. The schools in the country can accommodate only one fourth of the blind children who need education, while the workshops can accommodate perhaps only one twentieth of the adult blind community. Very few people can earn their living because there are no facilities for employing them. Many

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S. T. Dajani has a B. A. degree and is Principal of the Ala-iya School for the Blind, in Ramallah. He is also Chairman of the Arab Blind Organization in the Jordan.

have to live on misdirected charity and still others spend their lives in untold miseries. The Government is supporting a school for boys but none for girls. A voluntary employing agency was established twenty years ago, but it lost all its assets during the civil war and has not been able to restart its work on a financially firm basis. Missionaries have done much for the blind but their services have been of a local nature and rather superficial, serving limited groups.

The blind community in this country, therefore, lack every kind of social and cultural service, as well as vocational training and employment. The nucleus is there, but the funds for extension fail. There is in the country an efficient and complete elementary school for the blind, but it is much too small and some phases of education, like music, had to be neglected owing to the lack of funds. Then, there is the Arab Blind Organization, whose aim is to serve the adult blind. This charitable body is running a small workshop in which a few workers are employed. Plans for extending this token workshop exist, but we must await better times. The Organization has been publishing, as from January last, a monthly magazine in Arabic Braille, the first of its kind. This project is being supported by the American Foundation for Overseas Blind, but we hope that the campaign for providing culture for adults will one day include the establishment of a lending library. There is a small Braille printing plant in the 'Ala-iya School for the Blind, but the difficulties of importing paper and zinc in sufficient quantities preclude printing on a large scale. Besides, the reading public among the blind in the Arab world is too limited at present to allow the production of Braille books on a large scale. Also, those who can pay even a nominal price for Braille publication are so few owing to the prevailing poverty among the blind community, that even moderate production of books must be pursued with caution. The desire for learning Braille among the blind of the Arab world is very strong, and I am sure that were the necessary funds to exist for free distribution of literature in Braille, a great many readers would certainly avail themselves of such opportunities.

The nucleus for blind welfare work in all its aspects exists in the Jordan, but it is only a nucleus. It provides the skeleton for further extension and it is to be hoped that the influential elements in the different Arab states will interest themselves in blind welfare work and will help to formulate and enact a series of legislations whose aim would be to unify and rationalize work for the blind in all the Arab world. This is a very far-fetched dream, but perhaps one day it will be realized.

The U. S. Government is doing much in raising the social and economic standards in backward countries through the Point 4 Program, but it is to be regretted that no funds have been allocated for blind welfare work. It has been shown and proved beyond doubt during the second World War, especially in Britain, that blind workers could participate in the economic life of the community, and, I believe, that with a little planning, this idea could be effectively applied in the Middle East to the mutual benefit of the blind community and the public as a whole. With the adoption of Uniform International Braille in the Arab world, as a result of the magnificent efforts of UNESCO in this field, I am of the opinion that other welfare services for the blind should be handled on an international level. The spectacular success of UNESCO efforts in internationalizing Braille, should help to draw the attention of the U. N. Social and Economic Commission to the possibility of handling the problems of the blind world on an international scale.

TEACHING POPULAR MUSIC IN SCHOOLS FOR THE BLIND

By JAMES W. HAYES

There is one phase of music that many schools for the blind ignore and the students have to discover it for themselves. In most cases we find students attempting to comprehend this subject without guidance or advice from teachers experienced in the field. Yes, it is popular music that takes this brutal punishment and yet the general public seeks more and varied forms of the popular dance tunes than any other type of music today.

From these previous statements arise questions which may become problems when confronted by many music departments. It is the purpose of this article to attempt to suggest a solution for this ever-increasing problem. To begin with, let us see what some of the pertinent questions are.

SHOULD POPULAR MUSIC ACTUALLY BE TAUGHT IN THE SCHOOLS?

Yes, by all means. Students cannot grasp by themselves the finer points and intricacies that exist in this field. It is essential to set up an organized course of study covering the various types of popular music. Students are taught not to abuse and mishandle the classics and the same should be true for popular music.

DOES POPULAR MUSIC REQUIRE ANY PARTICULAR TYPE OF MUSICAL TALENT? First, let us break down popular music into definite forms and from that decide what abilities can be applied to these forms. In the early days of popular music we had Dixieland jazz. For all intents and purposes, let us call that the beginning. Then came the ragtime era, jazz in ragtime — the rage of the 20's. Next was swing, beginning in the early 30's. Just before the war came the present rage, bebop. Along with these types there has existed another form that has not changed a great deal over the past twenty-five years. Musicians call it commercial music. This is a type of playing that is demanded by the higher type of cocktail lounges and hotels. There are other forms, — the tango, rumba, novelty, polka and waltz. When we see how these forms have developed and how the early ones still exist today, the answer to our question is definitely yes. One musician may have a great deal of feeling for swing but none whatsoever for commercial music, and vice versa. Only the exceptionally talented can perform with equal facility all of the above mentioned types. This leads us to conclude that the average musician in this field should specialize in one or two particular types, in which his abilities seem to lie. It would be worthy to note that the staff musicians of radio stations as well as the Hollywood movie musicians are the exceptions to this, as they must be able to play anything from bebop to classical music.

James W. Hayes is the Music Instructor at the Connecticut School for the Blind. He has studied at the Julliard School in New York City.

Another specialized field is arranging. The dance orchestras must have their music arranged to fit the various capabilities of the musicians and the orchestras are "styled" by the arrangements. A good arranger must have a creative mind as well as an excellent working knowledge of harmony, orchestrations, etc. One can see that this is a very important field into which only a very limited number of musicians can enter with any degree of success. All of these facts point to the conclusion that popular music does require particular talent — talent which should be directed along the lines of any one or more types of popular music.

AT WHAT AGE SHOULD A STUDENT BEGIN TO STUDY POPULAR MUSIC? That would depend entirely on the initial musical ability of the student. There must first be established a good sound classic background as well as a prolific knowledge of Braille Music. If a student shows definite musical ability by the time he reaches high school, exposure to popular music should begin. You may say, "He hears enough on the radio. How can I improve on that?" What he hears on the radio is all well and good, but does he know what he is listening to? Can he differentiate between the types, and even more important, does he know good from bad? We must concentrate on teaching *good* jazz, swing, etc., and comparing the good with the bad, as this will clearly show the student the right path to follow.

HOW MUCH TIME SHOULD BE SPENT ON TEACHING POPULAR MUSIC? That of course would depend on the particular school and the amount of time available for music in general. There again, the pupil would be the controlling factor. Thirty to forty percent would be a good start — the remaining time to be devoted to the study of classical music. Part of this time could be devoted to forming a dance orchestra. Simple popular tunes can be taught to the school orchestra and as the members progress, more complicated arrangements can be made. Along with this program, arranging can be introduced to the more talented students and their work applied to the orchestra. It is very gratifying to write an arrangement and have the work played back.

WHERE CAN A TEACHER OBTAIN HELP IN THE UNDERSTANDING AND TEACHING OF POPULAR MUSIC? This is without doubt the most important question.

The adage, "Learn by doing," comes to

light at this point. Locate in your city a really good teacher of popular music. It is important that this teacher be an experienced professional musician with a well-rounded knowledge of harmony and the classics. Such a person may be hard to locate but a thorough search should be rewarding. Explain to him your problem and you will be amazed at how much fun you will have and how interesting your study can be.

Our cities have many opportunities for musicians who have good technique, can play in tune, can produce a good tone, and have at their mental command a thousand tunes. These musicians are well-paid and are respected in their field.

A few words at this point on the so-called "bad habits" of the popular musician. In all fields of endeavor there exist certain characters who are a discredit to their field. It is true that musicians are exposed to questionable associations but how many yield to these evils? A small percentage, yes, but they would succumb regardless of their work. Social workers, restaurant owners, law enforcement officers, and countless other workers have this same exposure. The music business of today has no room for a weak character and thousands of successful musicians have proved that these tales about the vices of popular musicians are *not* true. The people want and need these musicians and we, as teachers, can prepare our students for this added gainful employment that is offered. The most gratifying part of all is that the blind can enter this competitive field and succeed in it.

EDUCATIONAL NEWS FROM THE FIELD – UNITED STATES AND ABROAD

The cumulative enrollment of the West Virginia School for the Blind in Romney has passed the one thousand mark. From a beginning of five students in 1870, one thousand and five students have entered its doors. Most of these are gone now, but 81 remain for the 1951-52 term. Twenty-two of these are newcomers this year, half of whom have transferred from other state schools or from public schools; the rest are first-graders.

Construction has begun on a new $500,000 Physical Correction Building to be used by both the School for the Blind and the School for the Deaf. It will include a double playing floor, a swimming pool, four dressing rooms, a recreation room with a snack bar, a recreation room for roller skating, and a physical therapy room. The outside construction will be of brick with glass block windows. The inside will be of cement block covered with block tile wainscoating; floors are to be of Terraza. Seven rows of roll-away bleachers will be installed. The contract calls for completion by January 1, 1953. The addition of this building will make possible the organization of a physical education and health program that can be extended over week-ends. The new building will be heated from a central heating plant which began operation in February, 1950. The high pressure steam plant was constructed at a cost of $238,000 and was built to accommodate any additional buildings. The new Physical Correction Building will make its operation more efficient.

Our girls are looking forward to the third annual girls' Play Day to be held here May 2-4. Virginia, Kentucky, North Carolina, and South Carolina Schools for the Blind have been invited to send teams of eight girls each to take part. The Saturday afternoon events will include folk dancing, relays, distance softball throwing, horseshoe pitching, standing broad jump, and rope jumping with one, two, and three ropes. A dance will be held in honor of the girls that night.

The older girls are planning a banquet for the wrestling team after a successful season. Our team was undefeated in dual matches with Virginia, Maryland, and Western Pennsylvania Schools for the Blind and our West Virginia School for the Deaf. We took part in the West Virginia High School Athletic Association wrestling tournament and tied with Maryland for third place in the Eastern Athletic Association for the Blind tournament at Maryland. The boys are now preparing for a tri-state track meet at the Maryland School for the Blind on April 26, and for the Eastern Athletic Association for the Blind track tournament to be held in Connecticut on May 16.

Beryl Nuzum, Instructor
West Virginia
School for the Blind

* * *

The North Carolina School for the Blind recently had the premier showing of a new movie depicting activities at the school. The movie runs for twenty minutes. It has sound and color. The movie was made and donated to the North Carolina School by the Raleigh Camera Club, an organization of amateur and professional photographers in Raleigh, North Carolina. The movie shows a wide variety of activities at the school, including recreation and life in the cottages as well as all phases of educational work. The film will be made available to Lions Clubs, Parent Teachers Associations, and other organizations that may be interested in seeing it. Most of the showings will be within the state of North Carolina, but the film may be borrowed by other agencies by writing to the Superintendent of North Carolina School.

Egbert N. Peeler, Superintendent
North Carolina State School for
the Blind and Deaf.

* * *

The Eastern Athletic Association of Schools for the Blind held their Sixth Annual Tournament at the Maryland School for the Blind on March 7th and 8th. Schools participating were: Perkins, Overbrook, Western Pennsylvania, Virginia, West Virginia, North Carolina, Kentucky, and Maryland. It had been hoped that the tournament would be held in the new gynmasium at the Maryland School for the Blind, but since the building is not completed, the meet was held at the Dundalk Y.M.C.A. It was probably one of the best tournaments so far held. The Virginia School for the Blind won with 29 points; Perkins was second with 21 points; West Virginia and Maryland tied with 18 points; Kentucky 13; North Carolina 12; Overbrook 8 and Western Pennsylvania 7.

On March 14th and 15th a Conference for Arithmetic Teachers in Schools for the Blind was held at the Maryland School for the Blind. On Friday night Dr. Harold Moser, one of the authors of the "Growth in Arithmetic" series, spoke. This was followed by a question period. Saturday morning the Committee on Braille Notations discussed the new code with the teachers, after which sectional meetings were held. The sectional meetings continued on Saturday afternoon and Saturday evening. In order that grade levels be covered, it seemed advisable to break the conference into four work groups; one from kindergarten through the second grade; another for third, fourth and fifth grades; a third for sixth, seventh and eighth grades; and the fourth for high school mathematics. Each group elected its chairman and recorder. At the end of the series, all groups met to pass in a final report. These reports will be compiled and will be made available to anyone interested in the results. Teachers present felt that the conference was most worthwhile and have voted to make it an annual affair. Forty-nine teachers attended from the following schools: Perkins, Connecticut, Overbrook, New York Institute, Western Pennsylvania, West Virginia, Virginia, North Carolina, South Carolina, Kentucky and Maryland.

Francis M. Andrews, Superintendent
Maryland School for the Blind.

* * *

At the last Annual Meeting of the Board of Trustees of the Printing House, on October 30, 1951, the President was instructed to appoint a five-member Committee on Research to work with the Printing House in directing educational research similar to the way in which the Publications Committee acts in selecting texts for publication. This Committee has been duly appointed as follows:

Robert H. Thompson, Chairman
John C. Lysen
D. W. Overbeay
Dr. Neal Quimby
Edward J. Waterhouse

The first meeting of the Committee was held in Louisville on March 3rd, at which time plans were made for a beginning in educational research to be conducted under the auspices of the Printing House with the cooperation of the schools and classes for the blind. Miss Marjorie S. Hooper, Braille and Large Type Editor of the Printing House, has been appointed to head up this new project.

The educational research project at the Printing House has been established at the direct request of the schools and classes for the blind. To be successful, it must have the full cooperation of the superintendents and teachers in the schools in defining and aiding in the solving of the problems which will be studied. The Committee on Research and the Printing House will welcome suggestions from all sources.

F. E. Davis, Superintendent
American Printing House
for the Blind.

* * *

The Western Pennsylvania School for the Blind in Pittsburgh has embarked on a large-scale publicity effort — preceding its planned campaign to raise a million dollars for its new expansion program. In addition to a new Junior-Senior High School wing which is being built, the old building is being remodeled to include a new infirmary, new heating plant, new plumbing throughout the entire building, new lighting — and, last but not least — pastel painting in accordance with the individual need of every room.

On Sunday afternoon February 2nd, and again on March 16th, Open House was held to acquaint the public with the work the school is doing and the ever increasing scope of its program. The success of this effort may be measured by the fact that more than a thousand guests were welcomed on each occasion.

Mrs. Annabelle C. Davis, Director
Social Service Department
Western Pennsylvania
School for the Blind.

* * *

The Western Pennsylvania School for the Blind has been a sea of records as a result of a one-man campaign carried on by Mr. Si Steinhasuer, radio and television columnist for the Pittsburgh Press. More than 8,000 recordings and three record players have been donated. All types of records, from Verdi's RIGOLETTO to BABY, IT'S COLD OUTSIDE have been assembled to form a record lending library at the School.

The record library will be under the direction of the recreation department and will be operated by the students at the School. We hope that such responsibility will add to the total education of the students and will foster pride in the possession of the collection. A special room will be set up for the catalogued records, and the blind children may borrow the records as well as the record players.

When a student wishes to find the catalogue number of a particular record, he will look up the title in the card catalogue. The number of the record will be found on the card, and a corresponding number on the record shelf will denote the location of the recording. Record titles as well as catalogue and record numbers will be Brailled so that the student attendants can operate the library without difficulty.

Perhaps other schools have contemplated such a library but have had difficulty in making a start; perhaps some have wondered if the public would support such a venture. The enthusiastic response we have received from radio and television stations, organizations and individuals, might encourage schools for the blind in all parts of the country to initiate similar projects. Certainly record libraries have much to offer our children in entertainment and education.

A Guide Belt for Track

In the spring a blind boy's fancy turns to track, one of the oldest athletics engaged in by man. Although we have come a long way in the development of techniques and coaching since the first Olympic games in 776 B. C., our athletes, like those in ancient Greece, are striving for efficiency in the various events. Human motivation, always at work, makes us strive for success. This strong desire, no doubt, is responsible for the progression of track and field athletics.

Blind boys, too, like to win. They not only like to compete against themselves but against sighted teams as well. In the past outside competition has been limited. The reason is apparent. A blind team offers little or no competition to a sighted one. Nevertheless, I believe that with a few new techniques and a little practice a blind boy will be able to enter into limited events with the sighted and *win*. If the blind are to compete successfully with a sighted world after graduation, it is important that they be given a chance to participate with sighted students in as many activities as possible while still in school. Let's give the blind *a chance* to win.

With all of the recent improvements in the development of techniques in track, it seems to me that the blind have been neglected. How can they compare their records with those of sighted boys? Of course they have a handicap, but where is there a better place for them to overcome it than in school under professional leadership?

After watching blind boys run by grasping a rope fastened onto the cable along the length of the track, I constructed a guide belt to eliminate this unnatural style of racing. This belt is composed of a three-quarter inch leather strap lined with felt. A buckle at one end of the belt and adjustment holes at the other end enable the belt to be fitted to any boy, regardless of his size. Sewed one-third the distance from the buckle end is a metal ring. A guide line with clips at both ends is then fastened to the metal ring on the belt and the metal ring running the length of the cable. A piece of rubber is attached to the

center of the guide line to prevent jerking if the boy happens to run away from the cable.

The guide belt has a number of advantages. It permits the runner to take a sprinter's start. This alone substantiates its worthiness. It also allows the runner free movement of both arms. In addition to these important advantages, this guide belt prevents running against the cable and permits a boy to take his mind off the danger of losing contact with the cable. Furthermore, the belt can be constructed inexpensively.

This device may not be the answer to the most efficient technique for the blind runner; nevertheless, test results and discussion with blind runners prove that such a guide belt does have advantages over the old method.

Charles Ream, Director of Recreation
Western Pennsylvania
School for the Blind

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A Braille edition of the *Dog Owners Guide* is being sponsored by Kasco Mills, Inc., of Waverly, New York. It consists of three volumes and will be supplied to any chapters of Buddies, Inc., free of charge. Any organizations which wish to purchase copies of the Braille edition can do so by paying for the cost of the materials, which is $2.00 per volume. It is being prepared by the Volunteer Services for the Blind, 332 South 13th Street, Philadelphia, Pa., through the cooperation of its director, Mrs. Walter Price.

Robert A. Metz, District Sales Manager
Dog Food Division
Kasco Mills, Waverly, New York

* * *

The Publications Committee of the American Printing House for the Blind introduced its first A.P.H. Quarterly letter in January. The purpose of the letter will be three-fold:

1. To disseminate information concerning status of publications and the A.P.H. as it meets the needs of the schools.
2. To coordinate requests for Braille titles by providing criteria for guidance and the selection of books.
3. To provide opportunities for questions, discussion, and the clarification of problems which otherwise would not be possible of consideration until the annual meeting of the American Printing House.

The first edition listed procedures for selection and embossing of texts and other books and listed some of the outstanding current productions. Several items of new tangeable productions. Several items of new tangible Constructo Set, geometric forms, a geometry board, with raised lines, and the Imout Game which is an educational arithmetic game similar to bingo.

The January letter featured an article entitled *Criteria For Selecting Textbooks* by Ethel K. Arthur.

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REPORTS RECEIVED

Perkins Publications, No. 15, February, 1952, entitled *First Regional Conference on Mental Measurements of the Blind,* by Samuel P. Hayes, October 26-28, 1951.

First College Symposium on the Education of the Exceptional, held at Hunter College of the City of New York, February 25-28, 1952. Reports are being published by an editorial board covering the work conference areas of the Blind, Deaf, Delicate, Emotionally Disturbed, Hard-of-Hearing, The Intellectually Gifted, Mentally Retarded, Neurologically Handicapped, Orthopedically Handicapped Partially Seeing, Physically Handicapped (Epilepsy and Endocrine Disturbances), Socially Handicapped and Speech Handicapped. The conference was held at the Park Avenue branch of Hunter College February 25-28, 1952, and was attended by specialists from throughout the United States as well as from abroad.

* * *

School for the Blind—Fred C. Hill; Virginia School for the Deaf and the Blind—William T. Heisler; Western Pennsylvania School for the Blind—Mrs. Annabel C. Davis; West Virginia Schools for Deaf and Blind—Seldon Brannon; Wisconsin School for the Visually Handicapped—C. J. Engler.

Articles concerning the education of the blind should be addressed to The Editors, The Education of the Blind, 999 Pelham Parkway, New York 69, New York, on the following subjects: (1) Administration and Supervision; (2) Buildings and Construction; (3) Methods of Instruction; (4) Techniques, Technical Aids and Equipment; (5) Experimentation and Research; (6) Tests and Measurements; (7) Philosophy and Ideals; (8) Panel Discussions; (9) Problems and Obstacles; (10) Personnel, Who's Who, and Exchanges; (11) Questions and Answers; and (12) Educational News from the Field — United States and Abroad. For subscription and membership privileges, see below.

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